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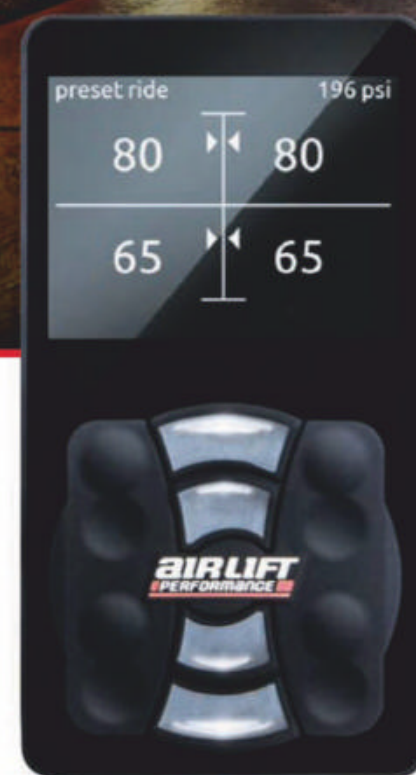


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SUBSCRIPTIONS

13 issues of Fast Car are published per annum
UK annual subscription price: £77.87
Europe annual subscription price: £90.00
USA annual subscription price: £90.00
Rest of World annual subscription price: £96.00

CONTACT US

UK subscription and back issue orderline: 01959 543 747
Overseas subscription orderline: 0044 (0) 1959 543 747
Toll free USA subscription orderline: 1-888-777-0275
UK customer service team: 01959 543 747
Customer service email address: subs@kelsey.co.uk
Customer service and subscription postal address:
Fast Car Customer Service Team
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5 Yalding Hill,
Downs Court,
Yalding, ME18 6AL
United Kingdom

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WEBSITE

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DISTRIBUTION IN THE UK

Marketforce (UK),
2nd Floor, 5 Churchill Place, Canary Wharf, London,
E14 5HU
Tel: 020 3787 9001

Distribution in Northern Ireland and the Republic Of Ireland
Newsprint: Tel: +353 23 886 3850

PRINTING

William Gibbons & Sons Ltd

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ED START

Issue 417 February 2020

POLITICAL SCANDAL

So who's glad the voting is finally over and we've got a new leader so we can finally get on with our lives? I am, that's for sure, it seemed like my news feeds were full of opinions, scandal and an insane amount of campaigning by all parties; it really was a relentless few weeks. Friendships were tested as differences of opinion were aired and people argued their points, but the votes have been counted and the winner has been elected. All you need to do now is to turn to page 14 to see who has won the fiercely contested Feature Car of the Year 2019. Well? What else did you think I was referring to? There was only one important poll going on in December, right? Whatever you do, though, just accept the result and move on, that's how democracy works. I actually think this year's winner is fully deserved, and there's definitely no shame in coming second or third in this vote.

We first launched the Feature Car of the Year competition in 2018, and it was such a resounding success that it's now an annual event. At the time we didn't realise the importance of winning this award would have on the owners involved. This year we even had someone set up a script vote to try and influence the voting numbers! Yes, a fully fledged scandal took place, but luckily our IT department were wise to it and we could discount any fraudulent votes. It just goes to show how much this competition means to the participants! And I reckon this month's cover car, a four rotor, 1500bhp capable, turbo-charged 26B RX-7 will be a hot contender in Feature Car of the Year 2020. As will the other cars in this issue. Enjoy.

Big Love,
Slim Jules

Jules



Feature Of The Month: It's got to be the cover RX-7! I first saw this car at SEMA 2018 and have been on the case to bring you guys the feature ever since. Give the car a google after reading the feature to treat yourself to the aural pleasure that the insane quad-rotor engine produces! Heaven.

Next Issue **on sale** 31 • 01 • 2020



SLIM JULES
EDITOR

"Who did I vote for? Well, that's a secret, I need to remain impartial."



MIDGE
CONTRIBUTING
EDITOR

"It was an easy choice for me, I voted for Helen's E30. Well, she's a mate!"



INITIAL G
ART EDITOR

"There shouldn't have been a vote – my decision of Phil Morrison's 964 should have been final."



GLENDA
WEBSITE EDITOR

"I like to stay impartial too, but if I had to choose it would be Stuart Davis' S3."



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UP FRONT



MUSTANG CHANNELS THE ELECTRIC BOOGALOO

The story of the Ford Mustang is a pretty incredible one. It's America's best-selling sports car of the last fifty years, and in late 2018 the 10-millionth Mustang rolled off the production line at the Flat Rock Assembly Plant in Michigan. Since officially going on sale in the UK in 2016, over 7,000 Mustangs have found homes here as well as 38,000 across Europe, so it's fair to say we're starting to climb on the bandwagon, but it's undeniable that the 'Stang is part of the cultural bedrock of America. 10-million is a huge number! The original pony car has always been a pretty diverse offering too; right from its early days you could have it as a saloon or a convertible, with a racy fastback arriving in

the line-up to really tap into teenage drag-race dreams. The model's fortunes have been a little up-and-down over the years – the Fox-body Mustangs arguably don't have much in common with the muscle-car fantasies of the sixties (although they're finding fresh legions of retro car fans today) and the less said about the Mustang II the better, but on the whole it's been a relentless success. Fast, practical, reliable motoring for the masses, with sporting intent and race heritage woven throughout. And now, ever keen to surf the zeitgeist, Ford has jumped on the coattails of two prevailing trends at once with the new Mustang Mach-E. You've probably noticed that every other car

on the road these days is an SUV, and you'll no doubt be aware of the growing push toward the electrification of day-to-day vehicles, so Ford want you to shove this in your pipe and vape it: the new Mustang is an SUV and it's electric. How 2020 is that?

Alright, this is probably going to annoy a lot of people. But are they the sort of people who would have bought a traditional Mustang? That's the gamble Ford is taking here (and remember, of course, that the Mach-E isn't replacing the petrol-engined coupe Mustang, it's a totally different niche to exist alongside it). So what exactly is the Mach-E? Well, it's an all-new platform, designed from the ground up to be fully electric, available in either RWD or AWD. There are three driving modes on offer – Whisper, Engage, and Unbridled – and the top-spec models will boast 465bhp and 610lb.ft, accelerating from 0-62mph in sub-five-seconds. You also get huge Brembo brakes, MagneRide adaptive suspension, SYNC comms and entertainment with over-the-air updates and, bizarrely, a drainable front trunk which you can fill up with ice to keep your beers cold. Perhaps the purists will tell you that this isn't a proper Mustang. Because it's an electric SUV. But in an age when SUVs are king and electric cars are an everyday reality, perhaps this is the Mustang that 2020 needs.



AC SCHNITZER SMEARS SOME WASABI ON THE Z4



It's all been a bit Supra, Supra, Supra recently, hasn't it? We were all waiting so long for Toyota to come up with a follow-up to the iconic Mk4 that when the new model finally arrived in 2019, we got a bit over-excited. Tuners have understandably been all over them; if you saw our SEMA coverage in last month's mag you'll have spotted that the new Supra was pretty much THE car of the show, everyone's building 'em. Even back at last summer's Goodwood Festival of Speed there was a 2JZ-swapped example drifting up the hill. And in all the melee, everyone's kinda forgotten that it has a sister car: internet bores rejoice in banging on about how there's a lot of BMW DNA in the Supra, but no-one seems to be picking up that particular BMW (the latest Z4) and doing cool stuff with it.

But thankfully for us all, AC Schnitzer is on the case. Having pumped out some hot power upgrades for the Supra, someone in a recent meeting clearly waved their hand in the air and said 'Hang on fellas, should we do all of this to a Z4 too?' – which makes perfect sense, as the hard work's already been done. So here it is, the AC Schnitzer Z4 M40i.

What the team has done here is to pump up the jams to the tune of an additional 59bhp and 73lb.ft, so the headline figures are now 394bhp and 442lb.ft. Which is more than enough to get rowdy with. They've also bolted on a

set of lightweight forged 20-inch wheels, a new front splitter and two-piece rear spoiler, sideskirts, carbon bonnet vents, and some fancy adjustable coilovers. So they've basically modded it in the Fast Car style and stuck it in the showroom.





Appreciating Depreciation **Volkswagen Scirocco**

New: **£21,500-£32,295** Now: **£4,000**

The Volkswagen Scirocco is one of those cars that just looks cool, right out of the factory. It's got a mean, angry face, and a pert little booty – and you know that all the underpinnings are pure Golf, so it's a complete package. Style, performance, handling, practicality, quality, reliability, it ticks every box you could wish for. Back in 2008, when VW decided to reprise the Scirocco name which had laid dormant since 1992, they struck gold: taking the sublime platform of the Mk5 Golf and adding a stylish body created something that really tapped into buyers' desires, and the things sold like hot cakes. There was a whole range available too – the entry-level option had a 1.4-litre TSI motor, the fiery one rocked a 2.0 TSI, and there was even a diesel

version available which proved surprisingly popular; transmission could either be manual or DSG, and as a halo they offered the raucous Scirocco R which had a frankly bonkers 276bhp.

Today, the Scirocco is a very affordable little thing. The model went out of production back in 2018, but when these cars were new the price range started at £21,500, rising to £32,295 for the Scirocco R. Nowadays? We're seeing prices dipping under £4,000, which represents a hell of a lot of hot VAG for the cash. And given that it's all Golf underneath, you know how tuneable these things are...

Top 5 mods: Revo remap, Scorpion exhaust, Air Lift suspension, Rotiform CHD wheels, Forge Twintercooler



ROZZER RANGER RAPTOR

Some police cars are cool, and some aren't. Dubai's got the market sewn up really, with their liveried Ferrari and Bugatti patrol cars. And the days of Volvo 850Rs tearing down Blighty's fast lanes are behind us, as most patrol cars you see these days seem to be boring saloons and hatchbacks that continue the trend of the crap unmarked Mk4 Astras on steels that used to pop up in

The Bill.

But today's crims shouldn't go thinking they're in for an easy ride. Just look what's been delivered to police forces across the UK – it's a fleet of frickin' cop-spec Ford Ranger Raptors! They're all equipped with FOX shocks and Baja racer-spec suspension, which means they can chase bad guys at well over 100mph over sand, mud and gravel. And if that's not enough to inspire the disaffected youth to abandon a life of crime and join the boys in blue, we can reveal that there's also a plan to draft in a fleet of Focus STs as well. Truly these are great days to be a traffic cop.



BENTLEY GETS ALL UP IN YOUR GRILLE



Special-edition sports cars and supercars are sort of pointless, really. Manufacturers take the very best examples of their model range, the ones that have received the biggest research-and-development budgets to be the very best they can be in terms of performance, handling, equipment and refinement, and then they lavish a load of fancy extras upon them and sell them for a premium in a limited run. And every single one gets bought by a collector, who'll lock it away in a private collection and never use it. Still, life's too short to be bitter about that – to be fair, when you buy a car it's nobody else's damn business what you do with it. We love a special edition, and Bentley's latest is particularly awesome because it's got something that we really like and you don't see enough of these days: race numbers painted on the grille. That's something that just always looks cool, isn't it? More people should do that.

Obviously the imaginatively-named Continental GT Limited Edition is about more than just painting a number on the front – the Pike's Peak graphics pay tribute to the record set in 2019 by Rhys Millen in a Conti GT, and it's got a sweet carbon fibre bodykit and eye-

searing Radium by Mulliner paintwork. All the chrome's been refinished in gloss black, and it has painted calipers and Colour Edition Pirellis to match the mad paint. The 22-inch wheels are gloss black to tie in with all the interior and exterior trim, and there's Radium stitching everywhere inside.

How much is it? Ah, there's no point even asking, all fifteen of them will have been snapped up by wealthy collectors. But it looks great, doesn't it? Nice to see Bentley being a bit mad, it's refreshing.





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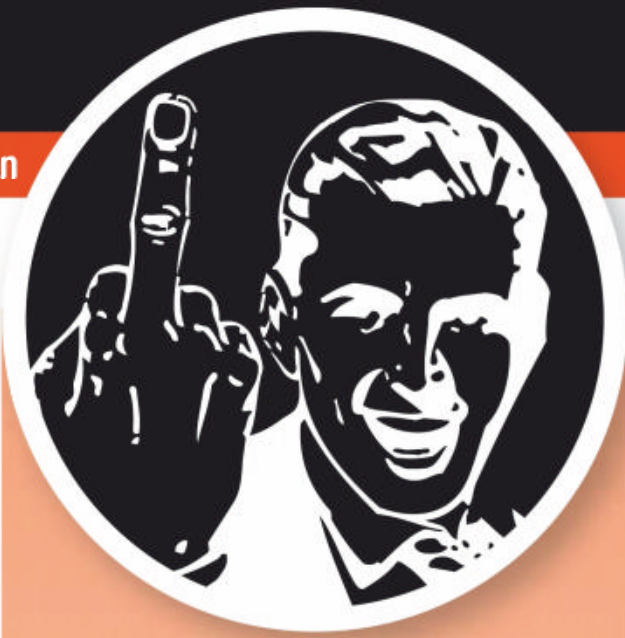
F-TYPE CHANGES ORIENTATION

The Jaguar F-Type is one of the prettiest sports cars on the market today; indeed, one of the prettiest sports cars ever made. And we'll fight anyone who says otherwise. So giving it a facelift was always going to be a risk – but as you can see, the Jaguar design team have pulled it off with panache. The back end remains largely the same; it's the front where the real changes have happened, and it's all about the orientation of the headlights. Look, they're horizontal. On the old F-Type, they

were vertical. Makes quite a difference, doesn't it? The super-slim LED lights give at an almost Mustang-like quality, which is no bad thing. Oh, and big news – there's no V6 any more! While the V8 in the outgoing car was obviously better, the V6 had cooler-looking exhausts (twin centre-exits always trump quads, that's just mathematics); however, buyers now have a choice of a V8 or a turbo four-cylinder. And there's no more manual gearbox either, which is annoying. But still, look at it! So pretty!

WHAT'S ON FEBRUARY 2020

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
27	28	29	30	31	1	2
3	4	5 <i>5th-9th February - Retromobile - Paris</i>	6	7	8	9
10 <i>Midge goes on holiday (again)</i>	11	12	13	14 <i>Date night with the missus</i>	15 <i>15th-23rd February Hands-On Half-Term - Beaulieu</i>	16 <i>16th February - Winter Motoring Breakfast - Brooklands</i>
17	18	19	20 <i>20th-23rd February London Classic Car Show - Olympia</i>	21 <i>21st-23rd February Race Retro Stoneleigh Park</i>	22	23 <i>16th February Drag and Drift Thrash - Crail Raceway</i>
24 <i>24th February Porsche Night Ace Cafe</i>	25	26	27	28	29	1



THE ANGRY MAN

Can we talk about the drive-thru?

OK, so we all love a Maccy D's. Comfort food, innit? Wherever you go in the world, you know it'll be exactly the same – a Big Mac is a Big Mac, the same in Southend as it is in South Shields, South Africa or South Central L.A. And the drive-thru is an awesome invention; when some bright spark came up with the idea in America in the 1940s, they knew exactly what people were about: if we're going to eat junk food, we don't want to have to put any effort in. Even getting out of the car is effort. But at the same time, driving off somewhere else isn't a great option because that massive bucket of Coke in your cup-holder's going to spill sticky fluid all over your gear gaiter, and that shit never comes out. So yeah, you park up in McDonald's car park having just been through the drive-thru, and eat your meal in the car. Why not, eh? People have been doing that for generations.

But here's something you only do if you're a total, total prick: wind down the window and drop all your rubbish on the floor, then drive off.

Seriously, that's a dick move. Why do you think that's OK? You think 'Oh, it's somebody's job to clear it up, it's not like proper littering'? That's f***ing selfish. That person has better things to do than clear up after you, they're not your mum. (Unless they actually are your mum, in which case what the hell are you doing?! No Christmas presents for you.)

Of course we all like a Maccers, and sure, we can't always be arsed to go inside the restaurant to order it. But putting your rubbish in the bin afterwards is just the decent thing to do. So don't dump it on the floor, or maybe next time Greta Thunberg will come along and gob in your fries.



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FEATURE CAR OF THE YEAR 2019

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YOUR **FEATURE CAR** OF THE YEAR IS...

Over 10,000 of you logged your votes and we've got to say you've got unquestionable taste. In third place came Charlie Thompson's turbo'd Clio 182, in second place was Helen Stanley and her wide-arched E30, but taking this year's top spot as the new FC champion is – drum roll please – Kiran Halsey and his amazing GT86.

With a heavily tuned 2JZ swap, air lift suspension, Rocket Bunny kit, WORK Meister S1 wheels and a one-off wrap, we can see why almost 25 percent of the votes went to this beast. A worthy winner indeed. Your trophy and a packet of Hobnobs are going in the post today, Kiran. Pop the kettle on, pour yourself a brew and have a biscuit on us. You deserve it, fella!

3RD CHARLIE THOMPSON'S CLIO 182



2ND HELEN STANLEY'S E30



1ST KIRAN HALSEY'S GT86





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With a little help from my friends

David Mazzei has built the world's wildest road-legal Mazda RX-7, but he certainly doesn't try and take all the credit for this beast...

Words: **Stav** Photography: **Mike Kuhn**



HOT RIDE



The modified car world is a massively varied place – it's one of the reasons we all love it, and for every type of car out there there's loads of different routes people take when it comes to upgrades. You could be building a road car, a race car, a show car, or concentrating your efforts and money on a certain area of the car: be it the engine, cosmetics, handling, or whatever. But what if you just want it to be, well, everything? In all honesty, most cars that try to be good at everything often end up a bit of a disaster. It's like they don't know what they want to be and end up not that great in any aspect. But there's exceptions to every rule and this flippin' insane Mazda RX-7 is one of them.

So what is this car? Well, it's everything. It really is. It looks like a show car. Yet it's used regularly both on the road and the track, and it's not just used, but it's used HARD.

When we say it's everything, it is from a spec point of view. I mean, what's the ultimate rotary engine? A quad rotor of course. Yep, it's got that. What's the wildest type of rotary engine porting? Peripheral ports. Yep, it's got that. Has it got a turbo? Hell yes it has – a gigantic GTX55 capable of up to 2500bhp; it's even got a gold plated compressor inlet! We could go on all day, but it really is top of the tree in every aspect.

The thing is to build the ultimate all-round monster of a car, whatever kind of car it is, is more than just spending money on the most expensive parts you can find; lots of people do this, and it usually ends up an under-performing mess. But the owner of this car, David Mazzei, knows this. This car has been under non-stop development and progress for years, and it's still being developed to this very day, but David gets some of the best people in the business, as well as some very capable friends, to make sure this car really does achieve his goals: a road-going car that's not only show quality, but capable of winning the Unlimited RWD class at Time Attack events.

FOUR PLAY

As we're sure you know, RX-7s come with twin-rotor engines as standard, and David's previous RX-7 had a triple rotor 20B engine which was running a huge 1200bhp+



If you ever see this thing on the road, DO NOT try and race it

capable turbo, but for this car he went a step further and chose a quad rotor, most commonly known as a 26B.

While most people, including David, say that a big reason for wanting to go quad rotor is the incredible noise, a scream reminiscent of the engines in the Formula 1 V10 era, there's a lot more reasons than that. Twice the rotors give twice the capacity and twice the airflow, which means, if all else was equal, twice the performance right across the rev range. And unlike adding significant extra capacity on most piston engines, this doesn't really lower the safe rev limit on rotaries – this thing happily revs to 9500rpm all day long. While rotary engines flow well as standard, this quad rotor has been treated to the most extreme porting possible and that's peripheral ports which, combined with the huge 98mm inducer GTX55 Gen2 turbo and many other tricks, make this engine create massive power levels at amazingly low boost. David's quad rotor makes over 950bhp at the wheels – which is well over 1000bhp at the flywheel at just 20psi boost. In fact, it was likely well over 1000 at the wheels in reality, but the wheels were spinning on the dyno, making it read lower than the true numbers. While it hasn't been dyno tested beyond 20psi, it's likely capable of 1500bhp or more with the boost cranked up to 30psi+. While the big boost numbers are always the things to show off about, the fact the car makes around 800bhp at the wheels at just 1bar (14.5psi) boost is even more



“Twice the rotors give twice the capacity and twice the airflow, which means, if all else was equal, twice the performance”



MAZDA 787B

The 787B was the Mazda race car that won the 1991 Le Mans 24 hours, and is one of the wildest-sounding cars ever made. Featuring a naturally aspirated quad rotor engine, it made 700bhp at 9000rpm, and could make as much as 930bhp at 10500rpm. Despite rotaries having a reputation for bad fuel economy and even worse reliability, as flat out race cars they are exceptional at both, and the lack of pit stops for refuelling and repairs meant the car took the win against much more powerful opposition. So what about the noise? How does a quad rotor engine revving to around 10,000rpm sound like a Formula 1 V8 or V10 engine revving to 20,000rpm? Well, it's mostly due to how rotaries work. A piston engine fires a cylinder once every two rotations, but a rotary fires every single rotation, so as we're used to how piston engines sound, in comparison a rotary sounds like double the rpm even at the same rpm!

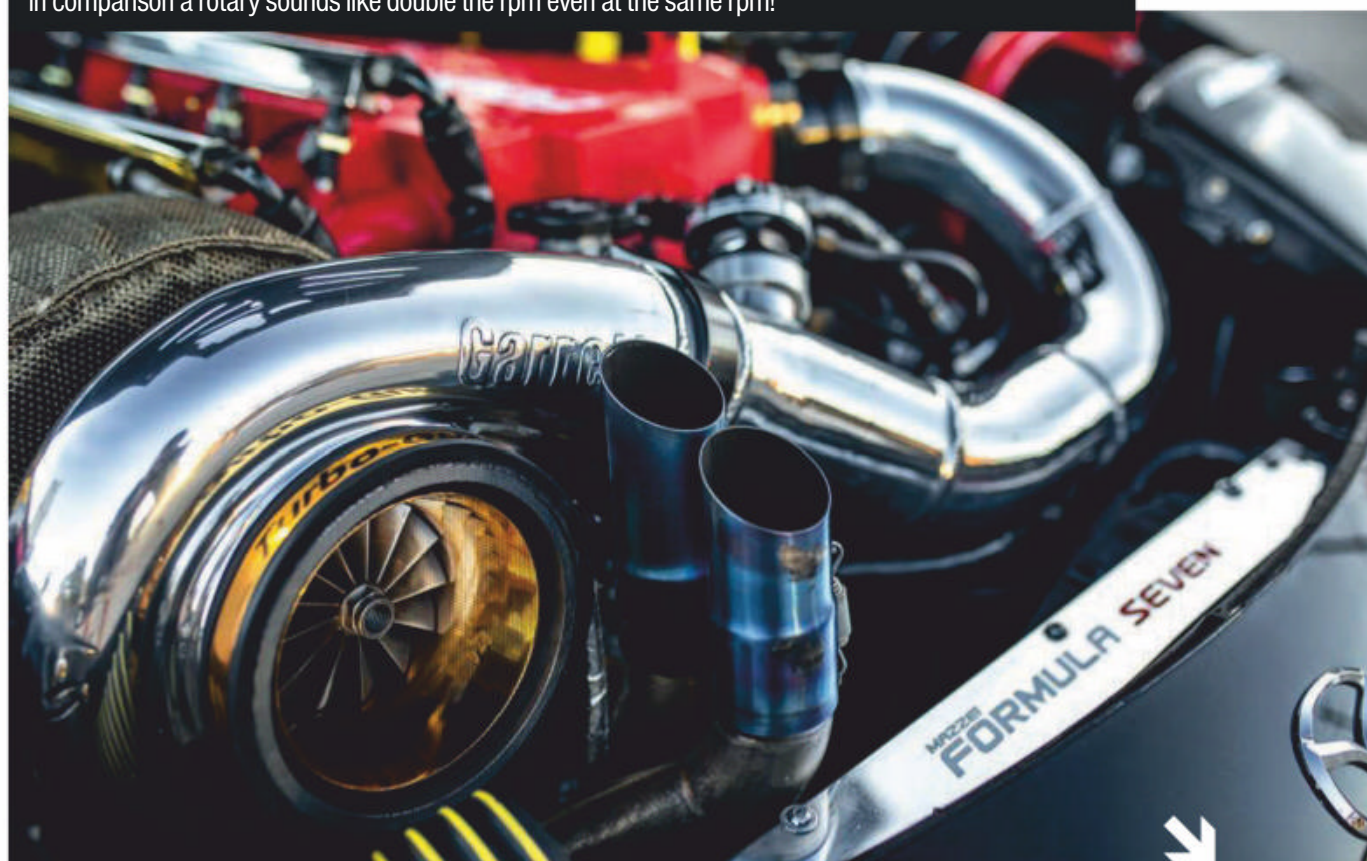
incredible; almost all of us have road cars that run that much boost or more on normal pump fuel, but do they make 800 screaming horses? In a word, no.

Probably most surprising to anyone who has noticed the turbo, which is the size of a small planet, is the fact this car is super responsive and has a very wide powerband. This car makes over 500bhp for well over 4000rpm of its rev range. This is far more than almost all engines of a similar level of power!

So was this incredible engine simply a case of ordering a quad rotor engine and a gigantic turbo? Hell no. In fact, the issues he had with it originally are a great example of why getting the best out of a tuned car just isn't as simple as that. And it's also a reason why he's so thankful to the specialists he's got involved in this project.

The original quad rotor engine set-up he had built and imported for this car was a bit of a disaster: the external oil pump set-up was incorrect which starved the engine of oil, the peripheral ports weren't sealed correctly so had internal coolant leaks, the manifold design was terrible, the rotors had balance and compression problems and his desired engine note, the high pitched wail of the 787B Le Mans car, wasn't there either.

Thankfully, rather than giving up or settling for second best, David was determined to keep his dream alive and get things done properly. Morgan Performance Fabrication





created him a new turbo manifold closely based on the 787B Le Mans car design, which not only eliminated any restriction and prevented boost creep, but gave him the awesome noise he wanted too. Chips Motorsports and Eccentric Motorsports combined their skills to create an engine which was both powerful and reliable. And to top it off, rotary tuning legend Abel Ibarra took care of the dyno tuning, making this engine powerful, reliable, awesome sounding, and kicking out some insane flames from the front wing-exit exhaust!

The above is literally the tip of the iceberg when it comes to this engine, and a look at the spec list confirms that, but the engine set-up is full of tricks, including a NASCAR-style shaft drive fuel pump mounted at the rear

of the car, a large cooler for the fuel mounted in the rear bumper, and the small matter of eight huge injectors which can flow an insane 12.5ltr per minute when flat out!

While we could talk about the engine all day, that wouldn't be doing the rest of this car justice, as it's a true all-rounder, and that includes its looks. The bodywork consists of a mix of RE Amemiya and Feed parts, as well as the legendary Scoot vented bonnet, and it has as much function as it does form, with functional downforce creating parts, ducting and vents to get the air to and from all the vital parts, and many components that are significantly lighter than the standard ones too.

WORK OF ART

The wheels and tyres are another great function and form thing. The wheels are WORK Meister S1s; top quality JDM rims that are right at the top of the tree in the show car world. But they are also genuine motorsport wheels that were commonly used in Japanese GT Racing in the 1990s and '00s. For tyres, the car runs Maxxis VR1 road-legal track tyres for the street but for track use, it runs full racing slicks for maximum traction.

The suspension set-up is all fully adjustable and rose jointed and uses top quality Fortune Auto coilovers. But the secret weapon behind getting this car to handle and corner as it should is the help and advice of another of David's friends, professional racing driver Bryan Leonard. As much as we like to believe we're great drivers, anyone who's been out on track with a true professional racing driver knows they're in a different league, and Bryan's experience and understanding of the way the car behaves has been a massive help in setting up the car.

As anyone who's built a big project knows, while skilled professionals are vital for some things, enthusiastic and



Form over function or
function over form?



Switching things up



BRIDE of place

THE NEXT MAZZEI PROJECT?

We've mentioned the fact that the legendary 787B 24hr Le Mans winning car was a big influence in the build of this car, but it's even more so in David's next planned build. While he's keeping the details close to his chest, David wants to build a mid-engine rotary race car with the intention of winning the longest race in the USA, The 25 Hours of Thunderhill. Who knows what it will end up like, but we suspect it will take big influences from the 787B, including a screaming quad rotor! We can't wait to see and hear it!



CHEERS GUYS...

Bryan Leonard and Grant Snyder, my girlfriend Cheyenne Stirling, my parents for all the support, Spec Clutch, Maxxis Tires, Fortune Auto, Chase Bays, Morgan Fabrication for the manifolds, Abel Ibarra for the tuning, CGS Vinyl for the graphics, Speedsouth for the support and Birmingham Magic City Octane.



HOT RIDE

helpful friends and family who aren't afraid to get stuck in can make the difference between an unfinished project and a show stopper, and David's wild quad rotor is no exception. Grant Snyder is a long time friend and fellow rotor-head who's spent countless hours helping set up and trouble shoot this car and David's girlfriend massively helps with this car too. And we don't mean the typical car polishing, spanner passing type of help, but legit 'oily hands fixing broken mechanical parts' type of help!

So this car's clearly a flame throwing, ear bleeding, tyre smoking beast, but nobody can explain it better than the owner and driver; over to David...

"It's all about the feeling and the experience. The sound of the engine you can feel right through your body and through every part of the car; it's intense. The noise from the turbo spooling, the blue flames from the screamer pipes you can see at night at full boost, and the massive backfires and flames from the side exit exhaust that can be so strong that they move the wing mirror. And the performance – well it's not about using it all, it's about using as much as you can before you become too afraid to keep your foot down!"

So is this car finished? Of course not. Until David's goal of winning Unlimited RWD in Time Attack is achieved then this is the one big thing to aim for. But even at this current spec it's already gone through many transmission changes, and the car has a lot more improvements already in progress as you read this. With David's great attitude and determination, and his great collection of friends and sponsors helping him along the way, this car will just keep getting better and better. ■



TECH SPEC: MAZDA RX-7

TUNING

Quad rotor peripheral port engine built by Eccentric Motorsports, Chips Motorsports peripheral port coolant modification and O-ringed inserts, lightened/balanced/clearanced rotating assembly, Plazmaman peripheral port intake clamps with Viton O-rings, custom aluminium Garrett core water-to-air intercooled intake manifold, Plazmaman 100mm throttle body with progressive throttle cam, rear hatch mounted intercooler heat exchanger, Garrett Gen2 GTX5533R 98mm turbocharger, "T51R compressor inlet mod" with gold plated inlet, twin Turbosmart 50mm Pro-Lite wastegates, Morgan Performance Fabrication equal length exhaust manifold built to 787B specs, MpFab Titanium wastegate tubes & stainless side exit exhaust, DEI gold reflective thermal barrier tape, turbine heat blanket, 3port Mac valve boost solenoid, 4x Bosch 2100cc injectors and 4x Bosch 1000cc injectors, billet fuel rails, Weldon 10AN fuel pressure regulator, modified fuel tank, Weldon remote mounted mechanical fuel pump, Waterman NASCAR cable fuel pump drive, AEM water injection, flex fuel sensor, in-tank primer pump, Peterson R4 external high pressure oil pump, billet baffled sump, Moroso oil accumulator, Haltech Elite 2500 ECU, Guldstand Pro EFI wiring loom, AEM Smart Coil ignition system, 4 channel exhaust gas temperature unit, AEM wideband, AEM 12 position adjustable boost dial, 200Amp alternator with adjustable voltage regulator, XS Power battery, 16 volt charging system, CBR Racing custom radiator, SPAL 11in extreme CFM fans, Mezziere electric water pump, rotor housing spark plug cooling system for rear rotors, dual 30-row oil coolers, single 15-row bumper mounted oil cooler, 30-row rear mounted fuel cooler, rear bumper mounted/diffuser exit, 1 gallon intercooler ice tank and pump; Quaife QBE69G 6-speed sequential gearbox, Carbonetic 1.5 Way 32-pack carbon clutched LSD, Spec triple plate clutch, Driveshaft Shop axles, differential case girdle and bracing, 19-row differential and gearbox cooler with Tilton pump

CHASSIS

Fortune Auto 510 Series adjustable coilovers with 12kg/14kg springs, adjustable front camber arms, adjustable tie rods, manual steering race, poly rack bushes, uprated front ARB with adjustable links, rose jointed rear trailing arms, rose jointed rear toe arms

BRAKES

Brembo Gran Turismo GT1 (Ferrari F50) 4 pot front brake system, drilled discs front and rear with stainless PTFE brake lines, Hawk DTC60/30 racing pads, spring-loaded 2.5in brake ducting, stainless steel front brake ducted backing plates, Chase Bays master cylinder and brake bias adjustment system

WHEELS AND TYRES

9.5x18in (front) and 11.5x18in (rear) WORK Meister S1 wheels, 255/35x18 (front) and 295/40x18 (rear) Maxxis VR1 road tyres, and 250/640x18 (front) and 300/680x18 Yokohama medium compound full race slick tyres

EXTERIOR

Feed front and rear arches, modified Scoot vented bonnet, RE-Amemiya sleek headlights, adjustable chassis mount rear wing, Mazzei Formula front splitter, RE-Amemiya rear diffuser, Feed side skirts, Mazda 99 spec front bumper, polycarbonate rear screen, Aerocatch bonnet pins, Quickclatch rear hatch pins

INTERIOR

Racepak/Haltech digital dash, Defi rev counter, boost pressure, and oil pressure gauges, carbon switch panels, battery kill switch, 6 point roll cage by Kirk Racing, 10lb AFFF Alcohol fire-suppression system, Halon secondary extinguisher, Sabelt 6-point racing harnesses, BRIDE bucket seats, SFI rollcage padding

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AD5
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& Gloss Black / Polished
8x18"



ASSASSIN
Gloss Black, Blackberry / Polished (18" 20" only)
& Gloss Black / Polished
7.0x16" 7.0x17" 8.0x18"
8.5x19" 8.5x20"



ASSASSIN GT2
Gloss Black / Polished
8.5x18" 8.5x20"



**STUTTGART ULTRA
CONCAVE**
Gloss Black /
Polished Face
8.5x20"



WOLFSBURG
Gloss Black &
Gloss Black / Polished
8.5x20"



LUCCA
Gloss Black / Polished, Gloss Black & Polar Silver
6.5x16" 6.5x17" 7.5x17" 8.0x18" 8.0x19" 8.0x20"



TORINO
Gloss Black / Polished, Polar Silver
6.5x16" 7.5x17" 8.0x18" 8.0x19"



AERO
Gloss Black / Polished, Gunmetal /
Polished, Bronze & Matt Black / Polished
8.5x18" 8.5x20"



KODIAK
Polar Silver, Gunmetal
5.0x14" 5.5x14" 5.5x15" 6.0x15"
6.0x16" 6.5x16" 7.0x16" 7.0x17"
7.5x17" 7.5x18" 8.0x18" 8x19"



DORTMUND
Gloss Black, Gunmetal / Polished, Matt Bronze (20" only),
Matt Black & Gloss Black / Polished
8.5x18" 8.5x19" 8.5x20"



KIBO
Gloss Black / Polished Lip
Gunmetal,
7.5x17" 8.0x18" 8.0x19"
8.5x20" 9x20" 9.5x21"



TURISMO
Gloss Black, Bronze, Matt Black
& Gloss Black / Polished
8.5x18"



MUNICH
Gloss Black, Matt Black, Gloss Black / Polished & Matt Bronze
8.5x18" 8.5x20"



SPORTLINE
Gloss Black Polished
8.5x20"



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THE FAST CAR PRODUCT AWARDS

The best of the best! And the winners are...

Actors have the Oscars, Athletes have SPOTY, and popstars have the Grammys to celebrate excellence, but what about the aftermarket industry? Well that has something better than all of the above; welcome to the Fast Car Awards 2019...



TUNING

Best Exhaust:

Cobra Corsa E VXR Venom

This new Venom stainless steel exhaust from Cobra is absolutely chuffing bonkers, and what with the E-shape VXR being one of THE hot hatches of the moment, we reckon these will simply fly out of the door. But that's not why it's scooped our Best Exhaust award. Nope, it's because this one is about as restrictive as the dress code at a Sports Direct themed party! There's even a warning on the website that reads, 'this product is designed without a rear box and will be extremely loud.' Yeah, no shit!

www.cobrasport.com



Best Excess:

PRORAM XL Cone Filter (410)

Bigger is almost certainly better, well that's what the missus is always telling me, so it's no real surprise that Ramair has won the Best Excess award for their PRORAM XL cone filter. And if you're wondering how big, big is – it's about 14 inches! It comes with a twin-tangential velocity stack to optimise all that lovely oxygen for a rather cheeky power hike!

www.ramair-filters.co.uk



THE FAST CAR PRODUCT AWARDS

➔ Top Innovation:

Direnza MVT Intercoolers

The team at Direnza have been super busy over the past 12 months developing a range of revolutionary MVT intercoolers. MVT is short for Multi Vane Technology: a clever system that incorporates special vanes within the intercooler. These have the job of distributing the charge air across the entire core to achieve almost unbelievable cooling efficiency. So, it's no surprise they've taken our Best Innovation award!

www.direnza.co.uk



Best Turbo Accessory: Turbosmart VAG BOVs

These new BOVs from Turbosmart are Electro-mechanical items and the world's first truly plug-and-play BOVs for VAG motors. They won the Best New Performance-Street Product at SEMA, chiefly because they're designed as a direct replacement for the stock item, and work without interfering with any manufacturer control systems. And now they've won the big one: a highly acclaimed Fast Car award!

www.turbosmartuk.co.uk



DETAILING

Best Detailing Product:

Meguiar's Hybrid Ceramic Wax

Choosing the winners is always a tough job, apart from this one. We knew this Meguiar's product was a winner when we tested it back in February! The idea is that it waxes your motor as you rinse it off. So, it's just a case of spraying it on, rinsing it off and... well, that's about your lot! There's no buffing, no curing time and no mess. Lovely.

Using advanced SiO2 technology, it also adds a hardcore layer of protection offering durability and water beading that far surpasses a conventional wax. Being consummate professionals in the art of laziness ourselves, it's hard to argue with that concept.

www.meguiars.co.uk



Best Detailing LSP: Gtechniq Halo

The boys and girls in white coats over at Gtechniq cook up some of the world's finest ceramic coatings. But what makes Halo different is, rather than paint, it's designed specifically for vinyl wraps and paint protection films. Shit, we didn't even know that was a thing, and for that reason alone (plus the simple fact that it's the bollocks), it's a worthy winner of our Best Detailing LSP 2019. Crack out the Champagne boys and girls, you're officially Fast Car winners!

www.gtechniq.com

THE FAST CAR PRODUCT AWARDS

Top Innovation:

Auto Finesse One Step

Our mates over at Auto Finesse just get it. While they produce some of the best waxes and LSPs on the market for the geekiest of detailing geeks, they also get that not all of us have all the time in the world to detail our cars, so they innovate products like One Step. This product not only cuts down the 'Steps' of the machine polishing process but also saves you time and money in one go. And if that isn't worthy of an award, we really don't know what is!

www.autofinesse.co.uk



Best Snow Foam:

Meguiar's Xtreme Cling

Formulated with an advanced 'Xtreme Cling' foaming action to create suds that stick to painted surfaces for as long as possible, it powers through road grime, dirt and contaminants in no time at all. What's really innovative here, and the reason it's a winner, is that it's not only ideal to use with your lance like a traditional snow foam but you can also apply the non-stripping foam directly with your mitt for lighter maintenance washes too.

www.meguiars.co.uk



Best Detailing Service:

Auto Finesse Academy

Okay, so we had to invent a category for this award. But just like One Step, how could we not give recognition to this innovation offered by AF? The AF guys are so passionate about their industry that they've erected (ooh, matron) a new purpose-built facility and designed courses to educate the public on the art of detailing. Want to be a Master Detailer? Look no further...

www.autofinesse.co.uk

CHASSIS

Best Excess Wheel:

Wolfrace AD5

Okay, we admit, we're being a tad controversial with this choice but here's the logic behind our decision...

How many times do you see a 'new' set of wheels being released that look exactly like something else already on the market, or even worse, a complete rip-off of an icon? A lot, will be your answer. Now, you can't say that about the AD5 – yes, it might look like a Wolfrace wheel, but that's the point, it doesn't look like anything else. And that's why it's a winner in our book!

www.wolfrace.com



Best Value Wheel:

Bola B2R

If there's one universal truth in the modifying world, it's that a nice, clean 5-spoke can suit just about anything on the road. These wheels never go out of fashion. The B2R is, in fact, a 21st century reworking of the long-lost Bola B2. This was one of their very first wheels to hit the street a decade ago, and they practically wore out the mould because of their infinite popularity. You see, technology has moved on in recent years and rather than being a cast wheel like the original B2, the B2R is flow forged to create an extremely light barrel, without any compromise on structural integrity. And all from just £625 a set, yes, a set, not each!

www.bolawheels.co.uk



THE FAST CAR PRODUCT AWARDS

Best Multi-Piece Wheel:

Brixton Forged BM01

We spotted this wheel at SEMA and instantly fell in love with it. And, yes, at £9000 a set they're a tad on the pricey side, BUT goddamn they're gorgeous. It's hard to release an original wheel design these days but Brixton has managed it with this 8-piece beauty (yes, you read that right, it's not a typo for once). We advise you to book a meeting with your mortgage adviser and release some equity to be able to get a set of these in your life. You won't regret it (probably).

www.brixtonforged.com



Best Monoblock Wheel:

Rotiform OZR

This was, without doubt, the hardest debated award in the office. With so many stunning 1-piece wheels launched in 2019 how could we choose just one? Well, we did, and the OZR is it! Tell us we are wrong...

www.rotiform.com



Best Air Ride Kit:

Air Lift A90 Supra

Okay, so we might have cheated slightly here, as this kit hasn't officially been launched yet, but judging by the number of bagged A90 Supras at SEMA 2019, it's apparent that it soon will be. Not to mention the fact that Air Lift has been developing a kit for the G29 BMW Z4, the platform the A90 Supra shares. So yeah, it's coming people and it is Air Lift, so it's going to be good!

www.airliftperformance.com



Best Coilovers:

KW Supra A90

The fact that we've given the Best Air Ride award to a kit designed for the A90 Supra will really grate with some people because the new Supra is a 'driver's car' but, fear not, because we've decided to balance the equilibrium by awarding the Best Coilovers to an A90-derived kit too, specifically these stunners from KW.

www.kwsuspensions.co.uk



Best Value Coilovers:

HSD Dualtech Mk7 Fiesta

Let's be honest here, if you're rocking a Mk7 Fiesta it's probably because it's your first or second car, insurance is high, and you didn't win the lottery on the weekend. It is with these factors in mind that we came to the conclusion that these HSD Dualtech coilovers needed recognition. Now, don't go thinking that because they're bloody good value at just over £500 that they're cheap! Oh no, the chassis gods at HSD are known in professional circles for their high-end MonoPro suspension, and they've crammed a whole load of the same engineering into these new Dualtech items for the baby Ford.

www.driftworks.com





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THE FAST CAR PRODUCT AWARDS

Top Innovation:

K-Sport Colour Calipers

There's no denying that one of the all-time great mods is painting up those stock brake calipers. We've all done that once or twice over the years, right?

The thing is, though, when you're looking for peak performance and upgrading with a stonking BBK, you don't really want to go colour matching your brand-new calipers with a tin of high temperature paint! So, we can see, and appreciate, where the guys at K-Sport are coming from with their rather genius idea of offering their famous BBKs in pretty much any colour your heart desires. Not only do they have the most comprehensive range of direct-fit kits in the business, but you can now have them in any colour you want too!

www.ksport.co.uk



Best Brake Hardware:

EBC RP-1

What happens when you give a load of engineers three years, a few thousand hours of dyno time, and a brief to create the best performing brake pad with no expense spared? You get EBC's RP-1 range. And they get our seal of approval! These things are awesome and even come thermally bedded to eliminate early-life fade.

www.ebcbrakes.com



Best New Performance Tyre:

Toyo Proxes TR1

The Toyo Proxes T1R has always been one of the most popular performance tyres on the scene, so it makes perfect sense that they haven't deviated too much when thinking of a name for its replacement, the TR1.

But here's the thing; the no-nonsense moniker may be a bit of a mashup, but then, the whole tyre is a mashup of sorts – an expertly crafted combination taking the best bits of the old T1R and the brand-new Proxes Sport.

www.toyo.co.uk



Best New BBK:

Revo Golf R 6-pot Brake Kit

Got a Mk7 Golf R? Well, you're doubly lucky then, because here's the epic braking product you've been waiting for. Revo teamed up with stopping supremo Alcon to develop this monster 6-pot BBK that comes complete with Motul DOT 5.1 fluid, braided hoses and Ferodo DS Performance pads. It's nothing less than your rapid, modern R-badged weapon deserves.

www.onlyrevo.com



AUDIO

Best Speakers:

JL Audio C5-653

If you're after pure SQ goodness, these C5-653 ear-pleasers from JL Audio are the speakers for you. At £700 they're not exactly a pocket-money mod but they're still great value! Have we gone mad? Nope, check out the construction and tech involved, and you'll start to understand why they are actually a bargain.

www.jlaudio.co.uk





Best Woofer: Kicker L7S

Every so often a legend from your childhood returns to the world all new, improved and better than ever, and that's what we've got right here. Based on the original Kicker square subwoofers, these new L7S feature uber-quality ceramic magnets, high temperature voice coils, a forged aluminium frame, patented corners (that are ribbed for your pleasure) and, just like the originals, offer 20-percent more surface area than any round sub in their class.

These aren't just the daddy, they're the daddy's daddy.

www.kicker.com



Best Amp:

Pioneer GM-D 4-Channel Compact

There have been some absolutely epic amplifiers released in the past 12 months but, after hours of toing and froing, we decided that the GM-D offerings from Pioneer should scoop first prize! Why? Well check out our review in issue 412 or buy one and find out. You won't be disappointed!

www.pioneer-car.eu



Best SingleDIN:

Pioneer SPH-EVO Series

It's no exaggeration to say that what we've got here is an audio-world game changer, and that's exactly why it's bagged the Best SingleDIN headunit award – yes it IS a SingleDIN...

So, what's the score then? Well, although the team at audio giant Pioneer have always been right on the cutting edge with their new launches, they've properly outdone themselves with this one.

The key here is the modular design: the screen and singleDIN control box (which is adjustable in depth) can either be mounted together to give a floating tablet-style display like you see on many a modern motor, or the control box can be detached and tucked away allowing the 6.8-inch monitor to be mounted separately. Basically, this means that there's an option for every car on the market, giving you the full doubleDIN experience, no matter what you drive. Clever, eh? A worthy champion!

www.pioneer-car.eu

Best DoubleDIN:

Kenwood DMX8019DABS

What we've got here is simply THE audio product of 2019! The new DMX8019DABS may be the Billy Big Spuds of Kenwood's popular DMX range, and the one with a monster spec that you'll inevitably end up drooling over in Halfords but you don't have to be some sort of tech wizard to appreciate its virtues, or the fact that it's a certified game changer.

But the bit that's made it a winner? That'll be the wireless Apple CarPlay! Yes, you read that right, CarPlay without the need for a hard-cable connection. But you needn't go crying into your cornflakes if you're one of those Android fans either because this also incorporates wireless phone mirroring for those devices too.

www.kenwood-electronics.co.uk



THE FAST CAR PRODUCT AWARDS



Top Innovation:

Wireless Charging Pads

With all the top-end mobiles embracing the wireless charging revolution nowadays, we'd be wrong not to get all excited about it too. It's clearly the future. Besides, fishing around for that charging cable is, like, soooo 2018, right? So, that's where these swanky plug 'n' play items are a master stroke of German engineering. They simply allow you to retro fit a perfectly matched charging pad into cars that haven't got one as standard. Top Innovation, indeed.

www.beyondproducts.uk



STYLING

Best Bodykit:

LB Silhouette

Over the past decade, yes it has been that long, we've got used to seeing the bolt-on fender look grow in popularity, and that's mainly down to one company – I am, of course, referring to Liberty Walk! But in 2019 Wataru Kato decided that his iconic aero kits needed a new direction. We would now like to introduce you to the LB Silhouette. Okay, you'll need a Lambo to rock one (for now at least) but that doesn't mean we can't bask in all its wide-arched glory!

www.libertywalk-eu.com



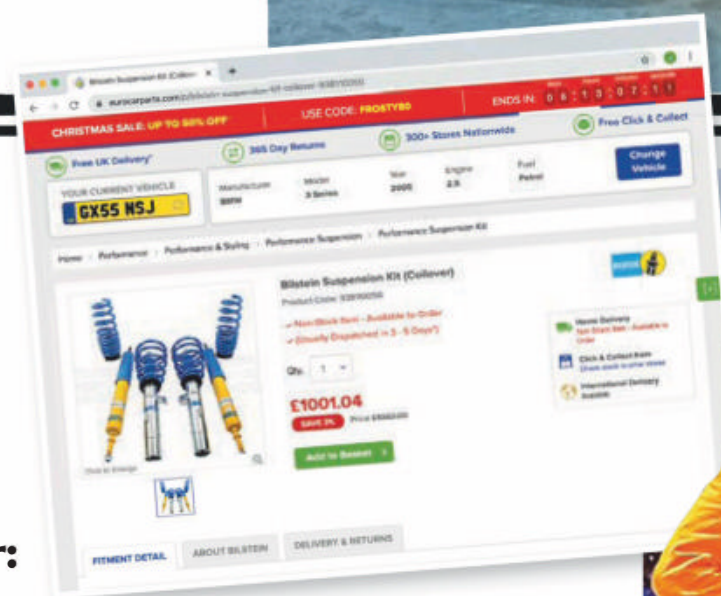
OTHERS

Online Retailer of the Year:

Euro Car Parts

The guys and girls over at Euro Car Parts really upped their game in 2019, and it was already strong in the first place. But why have they grabbed our Online Retailer of the Year award? Well apart from their amazing online offers (who lucked out in their Black Friday deals?), they're really pushing the modified side of their business. That's right, as well as all the maintenance parts they stock and sell, they also stock a bunch of top modified brands too. Everything from JVC headunits to H&R springs!

www.eurocarparts.co.uk



Modified Car Insurer of the Year:

Adrian Flux

You should always declare all of your mods to the insurance company, that's just common sense! But don't go worrying that it will increase your insurance premium to an ungodly price, because Adrian Flux specialises in modified car insurance and appreciates that us modifiers look after our cars more than Joe Bloggs. In some cases, you'll even save money!

www.adrianflux.co.uk



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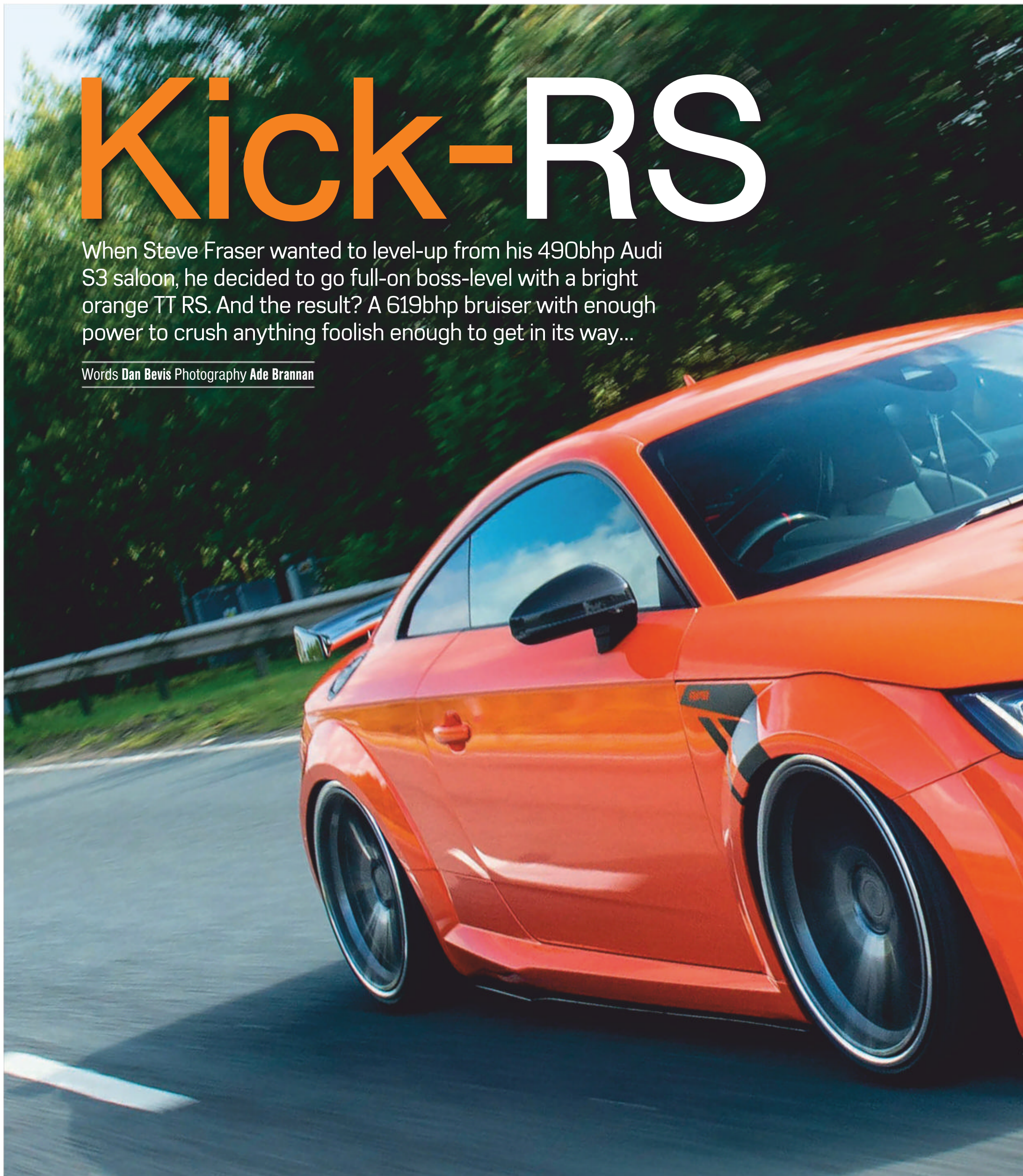
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Customer Enquiries
+44(0)1672 564595

Kick-RS

When Steve Fraser wanted to level-up from his 490bhp Audi S3 saloon, he decided to go full-on boss-level with a bright orange TT RS. And the result? A 619bhp bruiser with enough power to crush anything foolish enough to get in its way...

Words **Dan Bevis** Photography **Ade Brannan**







TTE700 turbo and APR Stage 3 Beta software have propelled Steve's TT RS to 619bhp

"Moderation is a fatal thing. Nothing succeeds like

excess." So said Oscar Wilde, and he wasn't a man to be argued with; bigger-better-faster-stronger has always been a motif of human advancement, and it makes sense to take one's endeavours to their logical conclusion of excellence and then just keep on pushing for the hell of it because... well, why not? As various other wise men have since reasoned, "If less is more, imagine how much more 'more' would be..."

There's an argument to be made that in the modern modifying scene, people who are really good at it often leave themselves wondering where to go next. After all, if you really care about this stuff, none of it's getting done in a painting-by-numbers style. The ideal build – to many, at least – is something that looks phenomenal on the showground, and contains astonishing amounts of power, along with the suitable chassis prowess to deploy said horses on the track or favourite B-roads. Show and go, working in perfect synthesis. And while projects evolve and there's always something to do next, there invariably comes a point when you start thinking about what your next car will be, which creates a conundrum: how do you top what you've already achieved?

This is a quandary which positioned itself at front-of-mind for Steve Fraser. The eagle-eyed will have spotted his S30 BMX plate at shows over the years, although not necessarily on this car. "My first properly built car was my Mk6 Golf GTI, in Stage 3 spec," he explains. A spectacular show build, it boasted around 370bhp, air suspension, forged Rotiform splits, boot install, full interior retrim and much more besides. That made way for an Audi S3 saloon, which was featured in FC back in 2016. "The S3 was running 490bhp," he says, "along with, again, air suspension, Rotiforms... there was lots of carbon fibre, Audi RS4 wingbacks, and a full retrim in red leather." A very special car indeed, and an impressive way to level-up from the faultless Golf when such a move was initially considered



hard to achieve. So the dilemma was, where to go next? The S3 stayed with Steve for three years through thick and thin, taking in countless shows, road trips and high-speed hijinks, it was genuinely emotional to let it go. However, a TT RS is a pretty strong way to send things into a new realm of performance.

"I started looking at TT RSs out of nowhere, really," he ponders, "although it quickly became apparent that it would be the only way to go. It had to be something I could make faster than my Stage 3 S3, and I didn't want an RS3 as it wouldn't be enough of a change from what I'd already done. So the TT RS was the best option – and what a solid option it proved to be!"

He's right, these cars are absolutely barking mad even in factory-stock form. The 8S-generation version (that is, the one that's been with us since 2014) uses the revered 2.5-litre TFSI 5-pot to lead its merry dance, which is frankly a whole lot of engine to begin with, and in RS tune it's amped up to 394bhp and 354lb-ft. Not a bad starting point, right? You also get quattro as standard, along with the 7-speed S-Tronic transmission, and 0-62mph is despatched in 3.5-seconds. This is a machine which really throws into sharp focus how the sports car genre has rapidly evolved over the last couple of decades; its performance is utterly demented. Pit it alongside any supercar you care to name from the 1980s (and quite a few from the 1990s, and

AUDI TT RS



Air Lift Performance suspension with 3H management provides the lows



9x20-inch Rotiform MHG forged three-piece wheels with 235/30 Michelin Pilot Sport 4 tyres

THE SIXTH ELEMENT

Carbon fibre is well established on the aftermarket as much as the showroom as a material which speaks volumes about how a car means business. And Steve's TT RS is positively dripping in it – not to an over-egged degree, but it's in all the right places: the mirrors and filler cap outside, and in the cabin you'll spot the lightweight weave forming the steering wheel, seat backs and centre console. Some of these are Steve's additions, some are Audi's own work, but it makes a statement about the car's racy intent. We love a bit of carbon!

beyond) and it would run rings around them. Steve could have traded in his Stage 3 S3 for a shiny new TT RS, left it stock, and just had a jolly nice time with it.

But obviously he didn't. This wasn't bought as a celebration of the evolution of German engineering, but rather as a blank canvas for his own unique formula for improving such things, as well as being the third major stepping stone in his own personal modifying journey.

"I was only idly looking around at first, when I came across this ex-demo example from Audi in Leeds," Steve recalls. "It only had 1,200 miles on the clock and was immaculate. My good friend Rob at Exclusive Automotive finalised the deal, collected the car and delivered it to me!"

On receiving his thrilling new pride and joy, then resplendent in its factory Nardo Grey, pretty much the first thing he did was to bag it. "Air suspension has always been my go-to," he laughs. "While I really love power and speed, I also love the physical look; I started out with the whole show and shine stuff, so naturally I fitted the air suspension myself in the first three days of owning the car!"

Impressive commitment to the cause, it goes without saying, and anyone who's observed Steve's modding modus operandi over the years or seen his builds out and about knows that he likes to chop and change his wheels,



endlessly swapping and re-evaluating in order to perfectly fill out those newly lower arches. Rotiform is his brand of choice, and you can see here that the TT RS is wearing a set of 20-inch MHG forged three-piece splits – they're certainly not the first wheels the project's seen and they no doubt won't be the last, but right here and right now they look pretty damned spectacular.

"I'm a big one for always swapping up the wheels, thanks to the support of Rotiform," he confirms. "I think I'm on my eighth set in just over a year! But this is definitely the best look I've had, the MHGs are staying for a while."

So with the altitude addressed, hand-in-hand with the stance, there were a few more tweaks to take care of to get the car on-point on the scene; the wider Muecke front wings are a necessity when you're bagged over twenties, and Steve's also raided the Rieger catalogue to angry up the vibe with fresh new sideskirts, front lip and rear extension. You'll also spot the carbon mirrors and fuel filler, the mighty HG Motorsport Aero One rear spoiler, and of course the none-too-subtle elephant in the room that is that full-on orange wrap. And once the show was suitably exaggerated to match the astounding go, it was time to make the latter a little more crazy. After all, 394bhp is an amazing factory number, but it doesn't really work in Steve's ascending scale of project results: the Golf had 370bhp, the S3 had 490bhp, so this state of affairs wouldn't do at all. A statistician may position those numbers in line and surmise that the next logical step would be to shoot for somewhere



The carbon-clad TT RS interior is proper posh

“The upshot of all of this is a hair-raising 619bhp ok”



around the 610bhp mark (for 370-490-610 makes mathematical sense as a sequence) and, given Steve's more-is-more persuasion, we're in the right ballpark. So that herculean TFSI five-banger has been treated to a TTE700 turbo, a Competition intercooler from Forge Motorsport, APR carbon fibre intake, and a rather shouty Milltek decat non-res turbo-back exhaust system. There's also an SRM throttle body inlet and various hoses from Forge, and the whole extravaganza of ludicrousness is knocked into line by APR's Stage 3 Beta software. The upshot of all of this



OWNER PROFILE:

Name: Steve Fraser

Age: 27

Instagram: @S30BMX

Occupation: British Gas Engineer /
Director of Offset Autohaus

First car: VW Polo 9N3

Dream car: Audi R8 V10+ – bagged and murdered out

Favourite thing about your car: Has got to be the TTE700, the power is insane

Hardest part of the build: Playing with wheels, and finding the set that looks the best and fits the best. I had to fit wide wings just to make my current set work!

Lessons learned from this project?

Chasing bhp numbers is stressful, and you always want more regardless.

What's next? No future plans as of yet, as I've got my eye on that Audi R8 V10! Watch this space...



HOT RIDE



Carbon mirrors compliment the orange wrap



is a hair-raising 619bhp and 530lb-ft. The transmission's also been remapped with a TVS Stage 3 tune in order to deploy all of that grunt effectively, and what's been created is a car with other-worldly performance that sounds like the very shrieks and rumbles of hell itself; it airs out like a champ on the showground, handles like a limpet, and grips relentlessly. Essentially, this car can do everything you might want it to, and it does all of it really bloody well.

"It's pretty funny seeing reactions to the car," he grins. "Being bright orange, it stands out like a sore thumb..." But of course people don't get to see it for long, as it's insanely rapid and disappears like Keyser Söze before you've realised what's happening. Unless you see the RS on the showground, that is, because this car's been built for both. Show and go in one glorious package. Moderation be damned – nothing succeeds like excess. ■

TECH SPEC: AUDI TT RS

ENGINE & TRANSMISSION:

2.5-litre TFSI 5-cyl, Forge Motorsport Competition intercooler and boost hoses, Forge Motorsport turbo inlet hose, APR carbon fibre intake, SRM throttle body inlet, Milltek decat non-res turbo-back exhaust system, TTE700 turbo, APR Stage 3 Beta software, 7-speed S-Tronic transmission with TVS Stage 3 tune

POWER:

619bhp, 530lb-ft

CHASSIS:

9x20in Rotiform MHG forged three-piece split-rims, 235/30x20 Michelin Pilot Sport 4 tyres, Air Lift Performance suspension with 3H management

EXTERIOR:

Wrapped in Avery Dennison Orange, Rieger front lip, Rieger sideskirts, Rieger rear extension, Muecke wider front wings, HG Motorsport Aero One rear spoiler, carbon wing mirrors, carbon fuel cap

INTERIOR:

TT RS carbon steering wheel, carbon door handle inserts, carbon seat backs and seat sides, rear seat delete, rollcage

THANKS:

"Thanks to my wonderful fiancée Rebecca for dealing with the stress when it all goes wrong! Thanks to Parm at Car Audio Security, Alex at Forge Motorsport, Ollie at Milltek Sport, Mark at APR UK / Awesome GTI, Janic at APR, Stan at Ecotune, Air Lift Performance, Rotiform Wheels, Sean at Silly Rabbit Motorsport, Simon at The Turbo Engineers, Rob at Exclusive Automotive, Tommy and Dale at Meguiars UK, and James at VSW Wraps."

You won't miss this Avery Dennison Orange wrapped TT RS on the road



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WHITE LABEL YKW, FROM £549 (SET)

It's a whole new decade now. We're firmly in the roaring '20s, so it could be seen as something of an irony that some of the coolest new wheels we've seen for an absolute age are inspired by hoops from, like, 50-odd-years ago.

Yep, what goes around, comes around and a healthy slice of retro chic is clearly the order of the day here. Although these YKWs from entry-level brand White Label may look like leftovers from the days where your nuts were measured in inches, 'three-and-six' could buy you a packet of fags and a pint of Best, and your Mum was busy strutting her stuff in a skirt so short that the whole world got to see what she had for breakfast, you'd be wrong. The trick is that, rather than steels and hubcaps, these are proper alloys produced in thoroughly modern sizes – staggered 17s in fact – making them bang-on for injecting a whole load of old skool cool into the cars we're actually driving around here in the twenty-first century.

On paper, all this may sound like a recipe for disaster, of course, but looking at these puppies, you just know it's about the best idea ever. We'd go so far as to say that these will

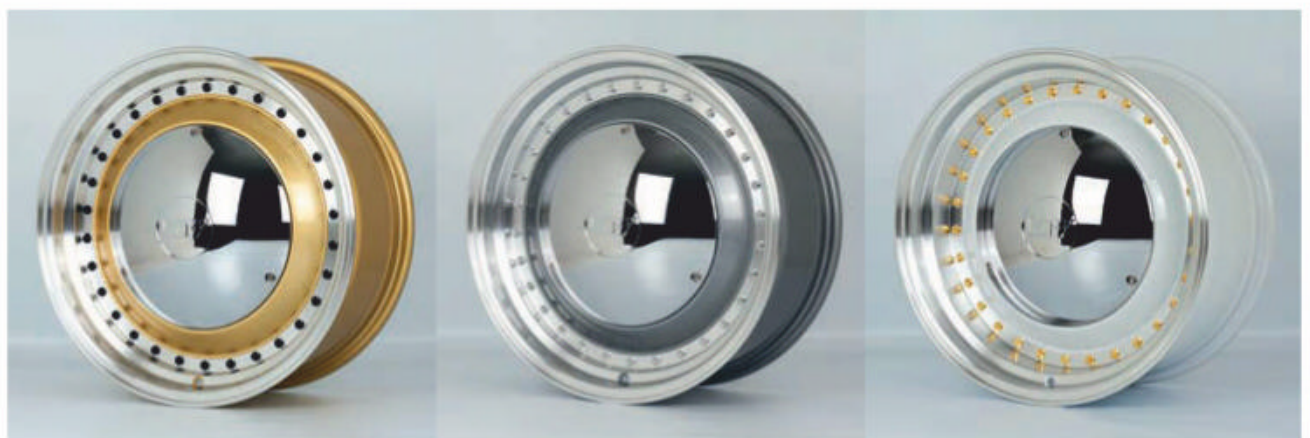
likely be one of THE budget Euro wheels on the scene for many years to come. And rightly so because that's what you get from the rare and beautiful concept of a simple, subtle design that can instantly make a project look anything but subtle. With the 'smoothie' look and screw on hubcap-like centres, they're pretty sedate wheels for sure, but how chuffing bonkers will these look on the right car?

We love the selection of finishes almost as much as we love the price too. Magic!

www.nuts4wheels.com

FEATURES

- Sizes: 7.5 and 8.5x17
- PCD: 4x100, 5x100, 5x112
- Offset: ET20-30
- Finish: Black, gold, gunmetal and white



FRESH KIT

NEW PRODUCTS

The shiniest and freshest mods on the market

RIVIERA RF107, £1080

Everyone and his pet poodle seems to be squeezing dubs under their arches nowadays. But, forget about all that 7.5x20 stuff - how about a mighty set of elevens instead? Shit, you can even have them in a rather fetching blue if you feel the need. And, what's more, that's just one of the top options available with the new RF107 from Riviera.

There's no denying that these are absolute stunners either, especially as they get more and more concave as they get wider. The sharp, dual-five-spoke design is clearly about as sophisticated as it gets, and the price for a set of full-fat 20-inchers is spot on too... and even better when you consider that these aren't any old cast wheels, they're actually posh flow-formed items engineered specifically to keep the weight down.

Load rated to 750kg each, and with the 8.5 and 10-inch widths available for custom drilling in any PCD from 5x98-5x127, we think you'll agree, that life doesn't get any better than that. Nice work!

www.rivierawheels.co.uk

THE SPECS

Sizes: 8.5, 10 and 11x20

PCDs: 5x112, 5x120, Blank
(custom drilled 5x98-5x127)

Offset: ET15-45

Finishes: Aqua Brushed,
Bronze, Carbon
Grigio, Gunmetal
Grey, Black
Polished Dark Tint



German Track Stuff - Das ist gut!

EBC Brakes Racing Mk7 Golf Floating Rotors, from £864

All of the blown 2-litre variants of the Mk7 Golf - from the Performance Pack and Clubsport cars, right up to the Golf R - are all pretty damn tasty on the power front, so it's no wonder that they make fine track cars.

You know what they say though; hardcore cars need hardcore brakes, so that's why these new discs from EBC Brakes Racing could be a godsend.

They're not messing about with these, offering direct-fit 340mm jobs that use a proper motorsport-style 'floating rotor' setup. The idea is that the friction surface literally hovers on eight stainless steel bobbins, over a lightweight all-aluminium hub (which itself saves nearly 3kg per pair). They also tend to transfer far less heat to the hubs and wheels than standard single-piece discs.

www.ebcbrakes.com

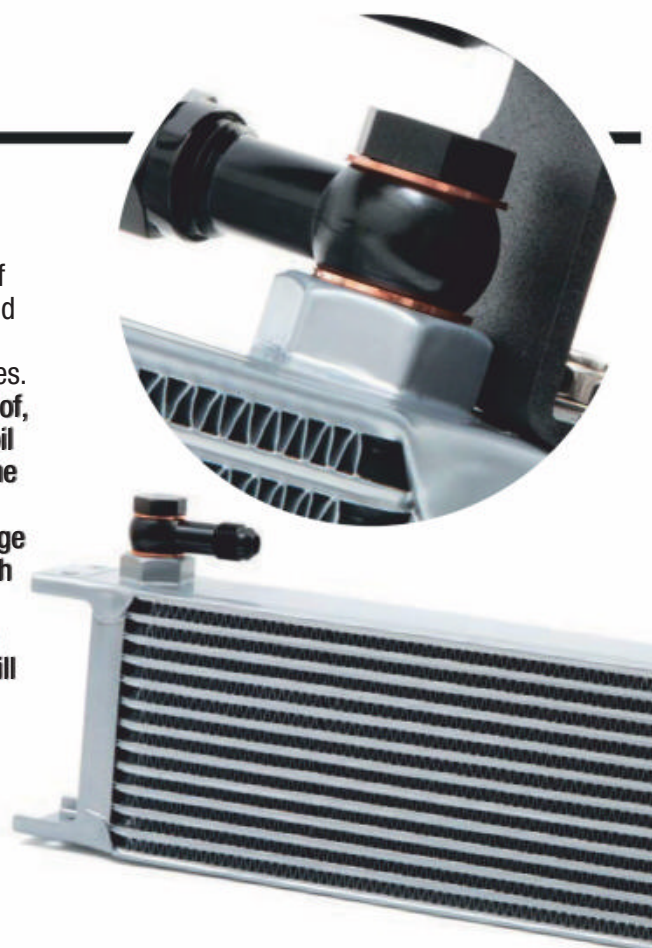


Forge A-Class AMG Gearbox Cooler, £500

The A45 AMG is, by all accounts, one of the quickest hatches on the tarmac, and for obvious reasons, the tuning mods have been landing fast for these puppies. While the engine is said to be bulletproof, the DSG gearbox tends to experience oil temperatures directly proportional to the level of welly given on the right-hand pedal. Luckily though, that's where Forge Motorsport can come to the rescue with this uprated oil cooler kit.

Designed to scoop the air directly from the front bumper, this 13-row cooler will keep those cogs shifting sweetly.

www.forgemotorsport.co.uk





HP TUNERS MPVi2, FROM £299

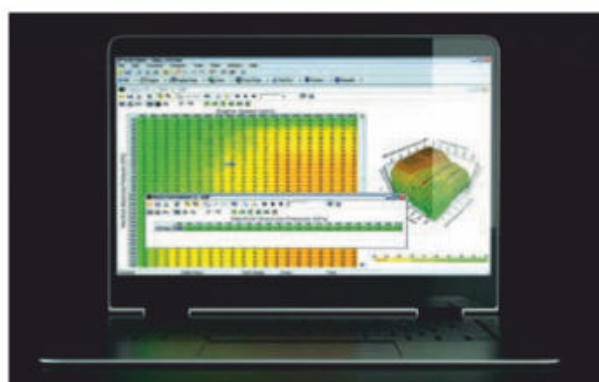
Here's an exciting slice of tech for 2020, and one that's set to get even more exciting as the year goes on and they develop more vehicle-specific maps for here in Europe.

HP Tuners are absolutely massive in The States and what they're offering with the MPVi2 here, is a simple and effective way of remapping your ECU at home. With one of these you can even read, edit and write your own code via their free VCM software. Although, if perfecting the hexadecimals yourself isn't your particular cup of char, their UK dealers will have a whole host of off-the-shelf maps available in the coming months too.

The main thing here though, is that this device is all about options. It certainly opens up a whole new world to a growing market who would like to write their own custom software for any car in any state of tune, and it does it in a way that's easier than ever before. Simply plug into your diagnostic port, upload your tweaked ones and zeros and away you go. It looks like the revolution in remapping has arrived.

www.hptuners.com

www.peron-automotive.co.uk



BLACKLINE FIESTA ST LSD, £594

Surely everyone loves a Fiesta, right? And there's no denying that the Mk6 ST has become a legend in its own lifetime. What with the fact that you can pick one up for the price of a Dairylea Dunker nowadays too, they're only set to continue smashing the UK scene, both on the road and even more on the track.

The thing is though, these little stormers may be suitably fast and agile, but any true weekend warrior will tell you that nothing will transform your Fiesta, or any other car for that matter, like a proper Limited Slip Diff.

The truth is that an LSD is the only chassis tweak designed to bias torque - essentially limiting wheel slip - to aid traction. They're also something of an essential for a hard-driven FWD motor, especially one running lots more power than standard.

Anyway, the good news is that the guys at Rally Designs can now sort you out with this amazingly well-priced Blackline diff to perform all this torque-based witchcraft. A bona fide racecar mod.

www.rallydesign.co.uk



Awesome Audio



JVC KD-X372BT HEADUNIT, £99

Many of us have the same special woman in our lives. You know the one; she always knows your favourite Spotify playlist, gently reminds you to get your arse up in the morning, and will even tell you a bedtime story, if you ask nicely. Nope, we're not talking about your mum, we mean everyone's favourite Amazonian filly (I thought that was your Mum - Jules), the simply wonderful Alexa.

What with millions of homes in the UK already having Alexa ruling the roost, JVC have decided that it'd be a rather marvellous idea to be able to order her about a bit in your car too. And they're not wrong either, especially as it all costs significantly less than you might think.

This entry-level single-DIN is exclusive to Halfords and comes in at a quid under the magical ton. It's packing all the usual gear you'd expect from a modern headunit (like Bluetooth streaming, smartphone compatibility and a 13-band graphic EQ), and it's put together with an extremely short, 100mm deep, body for super easy installation. But, aside from all of those impressive credentials, the big news is that it's one of the very first to be fully compatible with the Alexa App for faultless connectivity, essentially linking your motor to your home. That means that you can not only ask your faithful companion for your morning playlist or the latest news, but she can

control all the same bits and pieces indoors too... and all before you actually get through the front door. It's all doubly appealing at this time of year, "Alexa, turn the lights on and the heating up love. It's brass monkeys out here!"

uk.jvc.com

www.halfords.com



LIFESTYLE

The car culture experience doesn't just belong in the garage

AUDI E-TRON SCOOTER, €2000

We've never been too bothered about scooters until now, that is! Check out the new e-tron Scooter from Audi, the perfect way to get from B to C after you've driven your Audi from err... A to B.

This new 12kg e-scooter concept combines the advantages of an electric scooter and skateboard into one. How's that? Well, although riders keep one hand on the handlebar, they control the scooter like a skateboard with their feet by shifting their weight from side to side as four wheels with movable axles help you speed through the tightest of turns. The e-tron Scooter comes fitted with LED headlights, a daytime running light, rear light and brake light and can cover a full range of nearly 13 miles, achieved through clever recuperation technology. Basically, when the e-scooter brakes, it recovers through a kinetic energy charge.

Production is planned for late 2020 and rumour has it the decks may also be available in wood or carbon fibre.

www.audi.co.uk



PIRELLI F1 TYRE AND WHEEL TABLE, £2,495

Are you in the market for a super-posh, or should I say Super Soft, table to put your remote controls on during the F1 season? Well if so, you're in luck as Memento Exclusive has the ideal solution for you. These tables are crafted from FIA approved Pirelli tyres and are topped with a clear 10mm acrylic so you can admire the O.Z F1 rim beneath. Nice.

www.mementoexclusives.com



CARRERA DIGITAL 124 DOUBLE VICTORY, £450

Are you a big kid at heart and want to know what to spend your Christmas money on? Well, how about this new slot racing set from Carrera? It's from their digital racing series, so you can race up to three cars at once and you can even lane change for overtaking. This set comes complete with a 9.3m track, 2x 1:24 Porsche slot racers and 2x wireless controllers – slot racing has just got all 21st century. We want one!

www.jadlamracingmodels.com





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revo

Fast Mods

Thanks to companies like Revo the Mk3 Focus RS has reached legendary status...

The original Focus RS was a hardcore weapon and prices have been on the rise for the past few years; the burly Mk2 was a worthy successor, but the Mk3? Well, that's in a league of its own and one of the most respected hot hatches on the streets today and it has nothing to do with that infamous 'drift mode'. So why then? Because out of the box, its arsenal includes an impressive 313hp that enables it to hit 60mph in under five seconds – that's super-saloon fast. But what if you want supercar fast? Well, that's easy to sort out. You'll just need a Revo Performance Pack...

What's a Performance Pack? It's exactly what it sounds like, a package of performance that is a complete tuning solution with proven results. With over 12 months of track and road testing on both hardware and software, each component in the Revo Performance Pack has been designed and developed to work in harmony, achieving the perfect balance of usable power and day-to-day driveability.

It basically takes all the guesswork out of tuning your Focus RS. Saving you time, and giving you peace of mind while simultaneously taking your car to the next performance level.

Power is increased by around 100bhp which will see you hit 0-60 in 4.1 seconds (on road tyres), but the Performance Pack gives you so much more than peak power figures! Your Focus will feel lighter, more responsive and agile, and have lots more mid-range and top-end power (check out the performance figures). And all this will cost you £2060, which is serious bang for your buck!

What's included in this magical Performance Pack? This lot...

MK3 FOCUS RS



PERFORMANCE PACK

PERFORMANCE TIMES

	0-60	0-100	30-70
STOCK	5.02	12.57	5.17
PERFORMANCE PACK	4.03	9.76	3.99

Stage 2 Performance Pack testing was carried out on a private track in the UK with an ambient temperature of 17°C. 2016 Ford Focus RS MK3 2.3 EcoBoost with manual transmission in Race mode. Revo Rv019 19" wheels with road tyres, traction control off and 99RON Shell® vPower®. The average performance times are taken from nine consecutive runs.

FAST MODS: MK3 FOCUS RS

Also available for your Ford Focus RS 2.3 EcoBoost at **Revo...**

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■ **REVO** Rear Torque Mount: **£103 + VAT**

■ **REVO** Sound Suppressor: **£21 + VAT**

■ **REVO** Big Brake Kit: **£2035 + VAT**

■ **REVO** RV019 19-inch Wheels: **£999 + VAT**

■ **REVO** RV018 18-inch Wheels: **£980 + VAT**

www.onlyrevo.com



AIR INTAKE SYSTEM

The Revo Carbon Series Air Intake System for the Focus RS offers impressive power and torque increases by replacing the restrictive standard system.



REVO INTERCOOLER

The Revo Intercooler upgrade for the Focus RS lowers intake air temperatures, minimises pressure drop and allows the engine to produce impressive power and torque increases.



INTERCOOLER PIPE UPGRADE

Designed to increase power and reduce lag by replacing the restrictive stock pipework. This upgrade reduces restriction, allowing the turbo to perform more effectively at any level of tuning.

REVO SOFTWARE

The key to unlocking the full potential of your RS: Revo Software utilises the efficiency of each Revo Hardware upgrade to increase power and torque, as well as overall driveability.



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BLOW-OFF VALVES EXPLAINED

We grab the experts at Turbosmart to talk us through everything there is to know about blow-off valves and how they affect the performance of your car.

What is a BOV, then?

Known by many names, we're effectively discussing the same thing; diverter valve, bypass valve, blow-off valve, dump valve... They're one and the same. It's basically a valve which is designed to vent pressurised air on a forced-induction engine.



Who Are Turbosmart?

Turbosmart are an Australian manufacturer of boost control and turbocharger accessories to the motorsport, performance and tuning industries. The company started back in 1997 with just two products in their range, and have continued to build a reputation for manufacturing reliable, high-performance products – with a catalogue now containing hundreds of performance products – and have since opened support offices to service their markets in both the USA and now, the UK too!

WWW.TURBOSMART.COM



FC TECH: BLOW-OFF VALVES



How do they work?

These valves are actuated in several ways, but ultimately the aim is to dump compressed air from the charge pipes when the throttle is closed. Whether the valve fitted dumps the air to atmosphere, or simply recirculates within the plumbing of the engine will dictate how much noise it makes. Whether it makes noise (and how much) is up to you, however just about every new turbocharged petrol car made since the early 2000's has one fitted and they're there for a reason – to avoid and prevent compressor surge.

What is compressor surge?

Compressor surge is what you are trying to avoid by having BOV fitted; it's bad for the turbo, as it can reduce turbine reliability and life span. Compressor surge is basically the sudden surge of air a turbo has to deal with when you suddenly shut the throttle at high boost or load, like when shifting up gears under hard acceleration for example. The turbo is still spinning, but the boosted air has nowhere to go as the throttle is now closed. This causes a spike, or surge, in pressures which can potentially cause damage to the turbo itself. The job of a BOV is to allow that boosted air to escape, to avoid the pressure build up and therefore avoid any potential damage to your turbo.

The Kompact EM range

The new Kompact EM range is the cutting-edge in BOV technology that replaces the electronic valves found in many modern turbocharged cars. When electronic valves first started appearing, the main solution for improved performance was quite fiddly, often incorporating lots of small parts such as solenoids, boost reference adaptors, and extra hoses. This is not something Turbosmart considered acceptable. So, over the last four years the team at Turbosmart took on the challenge of designing a performance BOV that fully integrates with the car's complex electronics, to give us a simple plug-and-play upgrade. The design brief was simple; produce a 'bolt-on' and 'plug-in' component that is installed and integrates with the ECU in the same way as the OE unit does, but also offers motorsport-like strength and reliability.

Late 2018 saw Turbosmart win a SEMA award for their EM Valve, the solution that hit that design brief right between the eyes! The EM valve uses patented and proprietary air control strategy to actuate a mechanical valve via electronic integration, far faster response and with more precision than any OEM or aftermarket competitors could achieve. It's simple, reliable and every day there are examples of cars reclaiming lost performance after having a Kompact EM valve fitted.





How does a BOV work?

When you snap the throttle shut driving down the road, the blow off valve opens. It does this to vent the pressure that would otherwise build up in your charge pipe. As soon as pressures have normalised in the intake system, the valve shuts again, and everything goes back to normal. It does this to reduce stress on the turbine, it maintains turbine speed for maximum response (ready for you to plant your foot again) and what is increasingly relevant in modern vehicles, it keeps engine harmonics and noise levels in check too.

What are the BOV options?

The first one, and easiest to understand, is an externally venting valve. As the name implies, an this type of valve simply dumps this excess air straight to the atmosphere. This is generally the noisy option, but also the simplest way of installing a valve as it requires less pipework.

The next option is a recirculating, or plumb-back, type. Instead of simply dumping that pressurised air to the atmosphere, a recirc system diverts it back into the intake plumbing. It does this generally just in front of the turbo (between the filter and the

turbo) so the air can be used by the engine. This is the quiet option.

But there is a third option, a dual port valve which combines the best of both worlds. Some modern cars have electronic control systems that carefully measure the amount of air the engine consumes, and if an externally-venting valve is fitted and allows that air to escape direct to the atmosphere, the ECU can get confused and very upset. The solution is a dual port BOV, which literally has two ports; one which is a recirc style in an attempt to keep the sensors and ECU happy, and the other is an externally-venting port to provide that traditional dump valve noise. This is the best option if you have a vehicle with a MAF (Mass Air Flow) sensor and you're after some BOV noise in your life!

What's an electric dump valve?

While traditional BOVs have been mechanical and require a boost reference (from the inlet manifold) to actuate and open, manufacturers such as Ford and VW have started using an electronic, solenoid-actuated valve to take things to the next level. Instead of simply using the valve to avoid compressor surge, manufacturers

are now starting to use the valve for other purposes, such as complex torque management strategies under all sorts of different driving conditions. These valves require an extra ECU output, more wiring, and installation is far more complex.



FC TECH: BLOW-OFF VALVES



Will a BOV give me more power?

Well, it would be controversial to state that a BOV upgrade can increase the power output of an engine, but if your current set-up is limited by a leaking or fatigued valve then this is actually true. The standard valves on most cars are going to age and wear, like all components. That wear is accelerated (if it's not an immediate failure!) after increasing power with engine tuning, running increased boost pressures, and so on. Performance BOVs are built from components that don't wear out like the OE's plastic and rubber can, and are built on principles of boost balance where they're using tolerances and techniques that ensure you always keep all the boost you want, while venting the air you don't.

What spring rate do I need to run high boost?

BOV springs are designed to overcome vacuum under deceleration, not boost under acceleration. Therefore, it doesn't matter how much boost you run, the only

thing that will affect the strength of the BOV spring you require is the amount of vacuum your engine has when not boosting. That means things like camshafts and mapping should be your primary concern when choosing the correct BOV spring, not how much boost you want to run.

What size BOV do I need?

BOV sizing is based on how much power you have and how much air you need to bypass, not the common misconception of how much boost you're running. Of course, smaller valves will limit the volume of air you can bypass, and as we all know more horsepower requires more air. Therefore for big bhp applications, you'll need a larger, higher-flowing BOV too.

Where should the hose go?

The hose on top of the BOV requires a boost reference from behind the throttle body. Therefore, it should be connected to

the inlet manifold somewhere between the throttle body and the cylinder head. It is the pressure differential of a closed/closing throttle body that a BOV needs in order to open and do its job properly.

Where should I fit my BOV?

It needs to be before the throttle body, but the closer you can get it to the throttle body, the better! Some cars have the BOV fitted before the intercooler, and in some cases even on the compressor cover of the turbo itself. This can and does work, however it is something of a compromise. As boost pressure increases, so does the amount of pressure drop across the system, particularly across parts like the intercooler. This pressure drop, in some cases, can be significant enough for the BOV to sense and open the valve – after all, it's looking for a pressure differential in order to operate.

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THE FC PORTFOLIO





Photography: Ade Brannan Car: Audi TT RS Creator: Steve Fraser

THE FC PORTFOLIO





Photography: Mike Kuhn Car: Mazda RX-7 Creator: David Mazzei

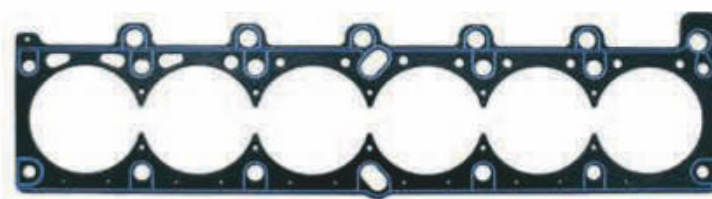
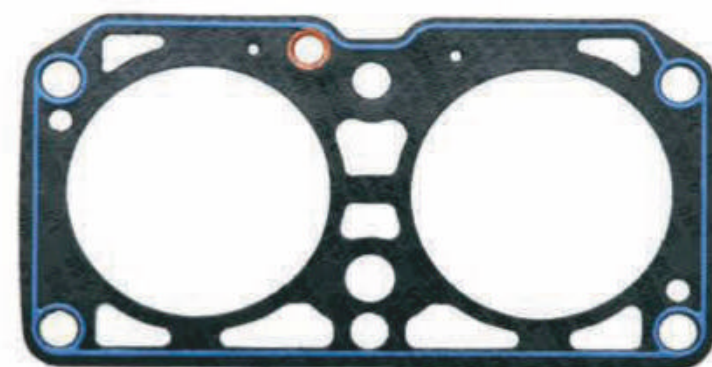
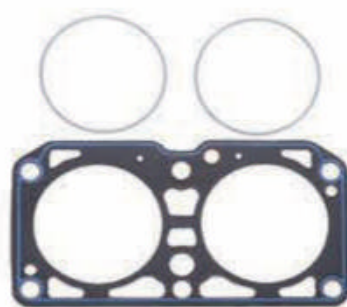
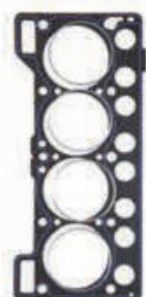


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Words Dan Bevis Photography Gian Fernandez

White Heat

The relentless roasting of sun-scorched Cali is the perfect environment to create a white-hot street-racer like this – just ask Alan Wei, whose brutal M4 is almost too hot to handle...

As human beings, we are – like any other animal – the product of our environment. Kids raised in remote Welsh villages will have different perspectives on culture and humanity to those growing up in South London housing estates, Manchester new-builds or East Kent coastal towns. And it's not just about the buildings or the people, but the behaviour, the interaction; principally, it's down to how people interpret their hopes and dreams and paint them onto the canvas of their everyday lives. You probably wouldn't park a rally-spec Mk2 Escort on the street in Brixton every night, in the same way that you wouldn't tear through Cheddar Gorge in a slammed VIP-build Lexus. It's what's around us that ultimately shapes us.

Take the example of Alan Wei. The fact that he's now General Manager of ModBargains.com and ModAuto, as well as owner and creator of the stellar BMW M4 you see before you, is largely attributable to his upbringing in Southern California. "Some of my most vivid childhood memories were of going on family road trips in our BMW E34 520i," he recalls. "Having grown up in SoCal, what can be considered the mecca of car culture, I was surrounded by and exposed to all kinds of cars, stock and modified, from a young age. I must have been around nine or ten when I first took notice of my cousin's Dakar Yellow E36 M3 – we would go out on cruises, and noticed a genuine camaraderie among like-minded enthusiasts. I've had an all-consuming desire to explore the artistry of car customisation and be able to share my passion with other enthusiasts since then. BMWs have a reputation for being the ultimate driver's car straight off the lot, and the idea of being able to turn that into something far more became the crux of my fantasies. The hidden potential waiting to be unlocked within BMWs has kept me very loyal to the brand."

FAST 4WARD

He wasn't paying lip service to the fantasy either; ever keen to walk the walk, his first car was an E46 323i which represented his fledgling steps into modifying, before levelling-up to an E92 335i. This ended up extensively modded, and won all sorts of show trophies and numerous features. It's fair to say Alan hit the ground running. And being a lifelong BMW appreciator, an M car was the next logical step.

"I've always been a fan of M cars," he grins. "I loved the performance of the N54 twin-turbo motor in my E92, but wanted something a little more refined for the next build.

When the S55 twin-turbo engine was announced with a closed-deck block and crankcase design, I knew that this was the right move for the next project."

Having sold his 335i, and keen not to spend months on the waiting list for a new M4 to be built to his specs, he was lucky enough to find an Alpine White example, complete with Sakhir Orange interior, which ticked all of the boxes that he would have done: the adaptive LED lights, the Executive package, the 513M wheels – it was everything he wanted, just sitting there on the forecourt. Of course, this was always going to be a starting point, and he had a clear vision of the direction this car would take: a street-driven build with a track-inspired look - OEM+, tastefully done with quality upgrades. The progression of the build







The S55 now pushes out 500bhp



can be subdivided into four distinct phases: aesthetics, chassis, interior, and finally power. Focusing on the first of these, it's self-evident that the M4 already has aggression in spades right from first principles, but there's so much on the aftermarket to accentuate this, and Alan put in the research time in order to get the looks on-point.

"After searching for a few months, I was able to get in touch with RevoZport who had just released a full 30-piece carbon fibre aero kit for the F82 M4," he explains. "I first heard of RevoZport, which is a carbon parts manufacturer based in Hong Kong, from a friend and fellow BMW enthusiast, Kirk. I've always appreciated the design of their parts as they're aggressive and very clean at the same time. Kirk put me in touch with Charles at RevoZport, and I was

able to secure one of the first full aero kits in the USA; it consists of 30+ individual pieces and is, in my opinion, one of the most complete aero kits available. It includes track-inspired elements such as a front splitter intake duct, brake disc cooling kit, and GT wing."

TIGHT CHASSIS

With the car sporting a wider and more aggressive profile, it was necessary to amp up such essential details as how the thing sits and what should be filling those arches. The answer to the former came in the form of Swift Spec-R springs – Alan wanted to retain functionality of the adaptive M suspension, and the Swift springs' increased rate is based on the M4's factory valve settings. The drop is 1.1-inch up front and 0.9-inch out back, so it's not hard-slammed, but noticeably lower while also retaining its performance characteristics and usability.

When it came to wheels, the theme of quality and performance was continued with a set of three-piece HRE 300s in staggered widths – 10x20-inch up front, 11.5x20-inch in the rear – and it's the unique colourway that really sets the footwork apart. Alan specced satin bronze faces and inner barrels, gloss bronze outer lips and gloss black hardware, and the results really are sublime. And what's crucial with the sizing is that there's room inside for the massive brake upgrade. See the red calipers peeping through? That's a brawny AP Racing package, the fronts being 6-pots with huge 390mm discs.

Given that this was always intended to be streetable and comfy as much as it is hardcore, Alan naturally paid a lot of attention to the interior appointments. You'll find no stripped-out track lunacy here, but instead a thoughtful accentuation of BMW's own ideas. "BMW did a great job



HRE 300s with satin bronze faces and gloss bronze lips

WHERE IT ALL BEGAN...

Modified Beemers were always on the cards for Alan, ever since his big brother handed down his E46 323ci when our man reached driving age. The Titanium Silver car was totally stock, but that wasn't the case for long – Alan started by retrofitting bi-xenon lights from an E46 M3, adding in some angel eyes, then moved on to the CSL front bumper, M-Technic rear bumper, Hamann sideskirts, BBS CH wheels, H&R Touring Cup kit, K&N intake, and Supersprint exhaust with DTM tips. "I remember many times in college I was eating ramen so I could spend money on car parts," he laughs. "That E46 was a blank canvas which really allowed me to start exploring the art of customisation. It's the one that started it all. I got bitten by the modding bug then, and haven't stopped since!"



on the F8x M3/M4 seats, and the overall quality and design of the interior was a huge improvement over both my E92 and E46," he says. "However, as we know there's always room for improvement! One of the first things I added was the carbon seat shell covers, followed by a variety of carbon trim pieces from Autotecknic to match the stock carbon fibre trim."

Pedal Haus provided the extended paddle shifters and the pedals, and perhaps the coolest interior upgrade is the P3cars digital multi-gauge – this provides OBD-2 data for things like temps, boost, air-fuel ratio, speed, braking timers, shift light and plenty more; it sits in one of the air vents, so it's neat, but it still retains the functionality of the air-con vent. Which is kinda useful in SoCal.

And so we move onto the fourth phase of the project (and arguably the most important given, y'know, what this magazine's called): the power.

"The S55 produces a healthy number from the factory; I wanted to open up some of that hidden potential, but more importantly to make better numbers in a reliable way," Alan reasons. First on the list was to upgrade the standard plastic charge pipes – which are notorious for failure – to





Autotecknic carbon fibre accessories compliment the BMW's OEM poshness

OWNER PROFILE:

Name: Alan Wei

Age: 33

Occupation: General Manager – ModBargains.com and ModAuto

First car: E46 BMW 323ci

Favourite modification on your car: My favourite mod would have to be the complete RevoZport aero kit. It completely transformed the overall look and feel of car!

What's next: I am actually very satisfied with how the car turned out in its current phase. Something I may consider is changing up the suspension – possibly going with a set of KW DDC PNP coilovers to keep M adaptive suspension functionality... or going a completely different route with an Air Lift air suspension and custom trunk setup for more versatility



aluminium items from Evolution Racewerks. "Fred at Evolution also designed a secondary auxiliary front-mount heat exchanger," he continues. "It adds a nice visual touch and looks like an intercooler behind the bumper mesh. A set of Evolution Racewerks 200-cell catted downpipes were added for faster turbo spool-up times and better flow, and additional cooling was added via a CSF heat exchanger and CSF top-mount charge cooler. I had a vision for what I like to call my 'engine bae' in terms of styling and really wanted something different, so I worked closely with Ravi at CSF and he had the first white top-mount cooler made for me. An Eventuri carbon intake and scoops were also added to improve the airflow – as well as the sound!"

A Remus non-res cat-back provides the aural drama, particularly thanks to the CG Precision valve controller which allows Alan to fully open or close the exhaust valves on the fly. And with all of the belt-and-braces mods taken care of, it was time to corral the ones-and-zeroes into order: Nik and Gary at VF Engineering were the guys for the job, and the VF HEX Stage 2 software flash was the method. "The VF Engineering HEX Tune delivers more than just power," Alan explains. "It's engineered to provide consistent and reliable performance on the street or at the track in a way that inspires confidence every time you press the pedal. Added features like the GTS start-up sequence roar and throttle over-run exhaust burble liven up the car, making it that much more enjoyable! The delivery is consistent throughout the power band, with proven horsepower and torque gains while still maintaining OEM-like drivability and smoothness; in the end we were able to achieve 500bhp and 550lb.ft which was a great improvement over stock numbers – and everything was done in a reliable fashion."

The crux of the matter is that, while Alan was adamant



that only the best parts be used and a stellar cast of characters was drawn in, this is very much a ModBargains build. Given his background, modding history and sheer enthusiasm, it's a matter of enormous pride for him to prove that the company he manages can walk the walk. "All of the upgrades were completed by our shop at ModBargains/ModAuto," he says. "All components fitted and worked as intended, we didn't run into a single issue with any of these modifications - which is a testament to the quality and engineering by all of these manufacturers." In this line of work, that's vital. And for Alan, well... he's a product of his environment, isn't he? Growing up in Cali, seeing rude Beemers every day then ending up working in the role that he does, he's pulled together all the threads of his own personal narrative to create one of the world's finest M4s. ■



Pedal Haus black billet aluminium paddle shifters

TECH SPEC: BMW M4

Styling:

RevoZport Performance 2x2 carbon fibre aero-kit, Stage 3+ M Performance 30-piece style kit inc. M Performance front splitter and lower splitter with side blades and intake ducts, sideskirts with side blades and extensions, front brake cooling intake, brake disc cooling set, front bumper canards, rear diffuser with left and right under spoilers and side blades, RZ Performance GT spoiler, Autoteknic carbon fibre mirrors, BMW Performance gloss black kidney grilles and fender grilles, IND painted front reflectors and keyhole cover, IND gloss black M4 badge, paint correction by Gloss Angeles Detailing, Gtechniq ceramic coating

Tuning:

S55B30T0 3.0-litre straight-six twin-turbo, Eventuri carbon fibre intake and scoops, IND custom painted engine cover, CSF top-mount charge cooler, CSF heat exchanger, Evolution Racewerks polished charge pipe, Evolution Racewerks auxiliary front-mount heat exchanger, Evolution Racewerks 200-cell high-flow catted downpipes, Remus non-resonated cat-back exhaust system with 102mm carbon fibre angled tips, CG Precision valve controller, VF Engineering HEX tune Stage 2 flash (GTS flash features include: GTS speed limiter reset [192mph], GTS sport display power level, GTS start-up sequence roar, GTS throttle over-run/exhaust burble), M-DCT 7-speed transmission, GTS DCT TCU flash, GTS electronic power steering flash, GTS traction control flash, GTS differential flash

Chassis:

10x20in (front) and 11.5x20in (rear) HRE 300 3-piece forged wheels – satin bronze faces and inner barrels, gloss bronze outer lips and gloss black hardware, 275/30 (f) and 305/25 (r) Michelin Pilot Sport 4S tyres, Motorsport Hardware stud conversion kit with MH Titan race lug nuts, AP Racing Radical red calipers (front – 6-pot, 390mm J-hook discs; rear – 4-pot, 380mm J-hook discs), Swift Spec-R springs, ZCP EDC flash

Interior:

Autoteknic carbon fibre DCT gear selector, shift console, handbrake handle and steering wheel trim, P3cars digital vent multi-gauge display with track package, Pedal Haus black billet aluminium paddle shifters, Pedal Haus black billet aluminium pedals, carbon fibre seat shells, red start/stop button, Bavsound Stage 1 speaker upgrade, Bavsound under-seat Ghost woofers

Thanks:

“I’d like to thank my amazing team at ModBargains and ModAuto for all the hard work and dedication they all put in day in and day out. Special thanks go out to all of my amazing partners: HRE Performance Wheels, Michelin USA, RevoZport, Remus USA, CSF Radiators, Evolution Racewerks, IND Distribution, VF Engineering, Autoteknic, Bavsound, P3cars, Pedal Haus, CG Precision, Motorsport Hardware, AP Racing Brakes, Swift Springs, and Gloss Angeles Detailing. This project would not have come to fruition without the collaboration and efforts from each and every one of you. Last but not least, I want to thank my wife for always being the number one supporter of all my dreams and aspirations.”



Words: Midge

DIY DAY JOBS & WEEKEND WONDERS

BATTERIES

You won't be going anywhere without one!

Yes, I'm well aware that I've said this every single winter since 2004, but it's bloody important because the cold weather really is a killer for your car battery. It's all due to what the AA refers to as the 'triple whammy effect'. Even a brand-new battery is less effective in the cold because the temperature drop will always reduce both the power output, and the battery's ability to accept a charge. At this time of year too, we tend to use all sorts of extras in the morning. Heaters, wipers, lights, arse warmers, the lot. So, that's the three main reasons why your battery will never be as good as it was in the summer... and, if it happens to pretty knackered to start with, it's easy to see why flat batteries are the biggest cause of annoying winter non-starts. But there is hope, and while we admit that



most of us don't replace our batteries at the recommended intervals (every 3-4 years), and simply wait until they die a death, there really is no excuse. Especially when there's plenty of warning signs like iffy starting and dimming lights before they even get that far. Never fear, though, here's how you can get your battery swapped out in a matter of minutes...

THE GEAR

Fitting Time:

Not long on most cars, not long at all.

Costs:

Battery: from £55

Different cars use different batteries with regards to both power ratings and physical size. So, first of all, you'll be needing the right one. Luckily for us here in the UK, you can simply bang your plate into the Euro Car Parts website, and they'll tell you exactly the spec needed. Simple.

As for 'topping up' with deionised water, well, that doesn't really happen nowadays. Most modern batteries are designed to be maintenance free, so don't worry about what your grandad says.

The actual fitting part also varies from car to car. In the vast majority of cases, you'll find your battery located under the bonnet, making access quick and easy. There are exceptions, though, so for illustration purposes, we're doing the job on a Beemer because... well, as with everything else on a BMW, it can be far more complicated than it has to be.

Specialist Tools:

To change your battery, unless you have a modern car and you're using a different type of – or a more powerful – battery (which we'll get to in a bit), you won't need any specialist tools. For testing purposes, however, it's always best to use a proper drop tester. When it comes to jump starting too, you'll need a power pack or jump leads... all pretty basic stuff available from around £15.

www.eurocarparts.co.uk

DO IT!

1 JUMPING

First thing's first, if your car won't start, even when you turn off all the electrical items and dip the clutch (to help take some of the cranking load off), you'll be needing a jump.



Jump starting is a pretty simple affair, just as long as you don't deviate from the procedure in your owner's manual. In the old days, it was acceptable to take your jump pack (or leads), stick the red one on the positive terminal, the black on the negative and fire it up.

With most cars since the '80s, though, you'll need to connect the red to battery positive, and the black to a suitable chassis earth. This is to stop any potential power surge scrambling the ECU, popping fuses or causing any other electrical gremlins. It's also exactly the reason why you should always refer to the manual.

On this BMW, for example, you don't even touch the battery – there are specific jumping points for both the positive and negative cables located under the bonnet (because the battery is buried under the trim in the boot). Not following the correct procedure here can cause more problems than you might think: sometimes weird stuff like wing mirror motors popping out. Strange but true.



If you're jumping your car from another vehicle, make sure they have their engine turned on, just so the alternator is charging their battery at the same time. If you're running air ride with digital management, a top tip is to disconnect the power and earth cables to the system (which will usually be attached to the battery terminals), to prevent any problems.

2 TESTING

It's always a good idea to test your battery regularly, especially when the temperatures drop. Most garages will offer this service for free.

If the car has been sitting around for a while and won't start, it may just be that the battery voltage has dropped a little, so there isn't enough juice there to crank the starter motor. In most cases, a jump start and a bit of a drive to give the alternator a chance to charge the battery back up will sort the issue out.

The real problem comes when cars are left for long periods and the battery has been allowed to lose most of its charge. Most batteries are only able to be recharged effectively until the voltage drops to a certain point, say 7 or 8 volts. After that they won't be able to hold their voltage for long periods, no matter how many



times you try to juice them up with a battery charger. If you're leaving a car for a long time without disconnecting the battery, a trickle charger to top it up automatically is always a good investment.

As for testing, once you locate your battery, the only way to test it properly is by using a drop tester. These are relatively cheap devices designed to place an electrical load across the battery to see if it will hold the charge effectively; the same kit professional garages use.

It's not perfect but you can also get a rough idea with a normal multimeter. A battery (with the engine off) should hold just over 12v (roughly 12.4-12.8v); if yours has dropped significantly beyond that, especially after you've jumped the car and had a drive, it's going to be time for a replacement.



3 REMOVAL

On the vast majority of cars, replacing the battery is very simple. Not so much on some of the German stuff like here, but whether your battery is under the bonnet, in the boot or even in the floor, the process is the same. Once you've actually got access, you'll find that it's secured tightly to the car to stop it moving about. This could be with a large clamp across the top, or a smaller item holding the battery down from the bottom. You will notice that most batteries have a special ridge around the bottom for exactly this reason.

Some (as in our case) will require the removal of some brackets or trim blocking the way too. So, the first job is to remove all of these restrictions and get the battery free to move.



4 TERMINAL LEADS

Now you'll need to disconnect the cables. Start with the positive item by loosening off the securing nut and removing the clamp from the terminal. This can be tucked out of the way for now. We always start with the positive as, once it's removed, there's less chance of accidentally shorting out the system. Next, remove the negative cable in the same way, and you'll usually be able to slide and lift the whole battery out. Be careful not to smash your knuckles or squash your fingers, these things weigh a ton. Keep the battery level, be careful not to drop it, and don't forget to dispose of it responsibly at your local recycling centre. Battery acid is seriously nasty stuff if you manage to spill it. Bear in mind that on some cars, there's a couple of bits to look out for before you can remove the unit. Plenty of VAG motors, BMWs and the like will have a fuse board, or some sort of electronic module, bolted or clipped to

the top of the battery. You'll need to hold this out of the way to get your battery out.

Others, particularly when the battery is in the boot, will have a special breather pipe connected. Standard lead acid batteries

need to vent off the gasses they produce, so these will usually be directed through a pipe to the outside of the car. Again, it's all pretty straightforward, you just have to remember to plug this into the new battery.



5 NEW BATTERY

You will have already ordered your new battery, but a few visual checks will help ensure it's the correct one. In most cases, it will be around the same size as the item you're taking out. Normally the height is the biggest issue here, but the width or length will often differ a little. The point is that it has to fit in the space securely and be clamped down. So, if it's excessively different, it's probably not the right one.

Second, the terminals. Some cars have their battery terminals reversed. In our case, the positive is on the bottom right, but some may have it on the bottom left. It goes without saying that it's important not to connect any cable to the wrong terminal. These terminals also come in different shapes and sizes, so basically speaking, the ones on the new battery have to be the same as on the old.



Finally, we have the specifications on the top. There are various numbers on car batteries, but perhaps the most crucial is the Ah (amp hour) number, which tells us the amount of current available for a period of time. (A 70Ah battery, for example, will provide 70 amps for one hour, or 1 amp for 70 hours.)

The Cranking Amps (here in Europe denoted as the A(EN) number) is the current that the battery can provide for 30 seconds at 0degC before the voltage drops to 7.2V. And the CCA (Cold Cranking Amps) is the same, but at -18degC. The CCA is less prevalent nowadays, as modern ECU controlled cars start quicker than classics; it's not even shown on our new battery here.

Anyway, most of these numbers should remain the same on your new unit, or be slightly more for high performance batteries. Basically, you don't want the numbers getting smaller.



6 REFITTING

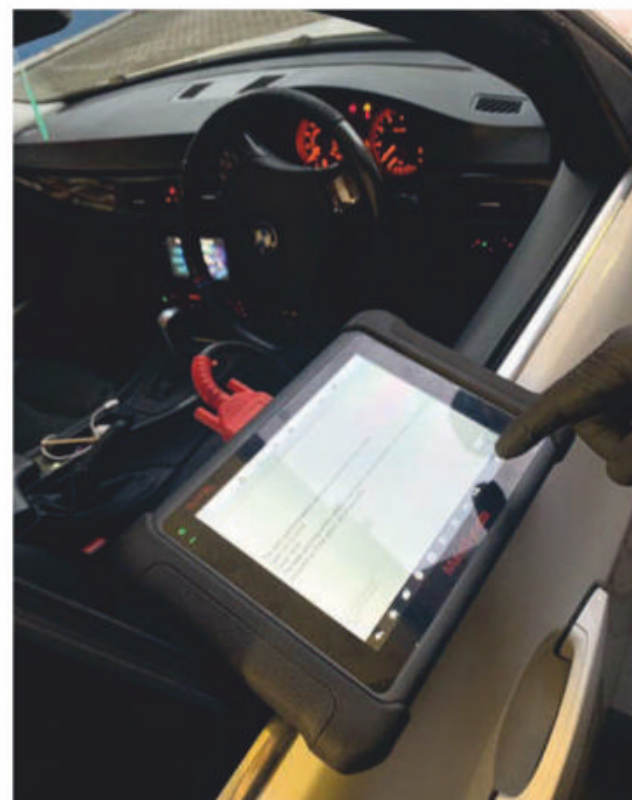
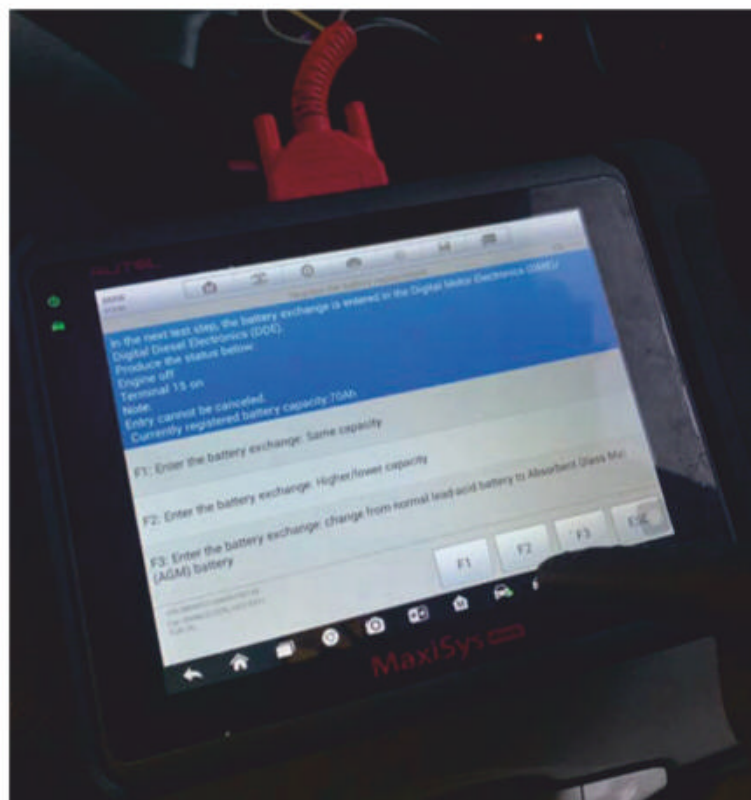
Some batteries may have breather bungs fitted for when they're in storage and these will need to be removed before installation. They'll nearly always have terminal covers that you'll need to whip off too. When that's all sorted, slide the new battery in place, being careful to avoid snagging any cables along the way.

Once the battery is securely clamped down, you can reconnect the cables. Start off with the negative, and then follow with the positive. The live connection may spark when you slip it onto the terminal, and although this is normal, you still don't want to prolong the sparking as it may create a surge in the electrical system. In other words, do this bit as swiftly and positively as you can, and wear gloves if you're not confident.



7 CODING

In most cases you'll be done by now, but on some modern cars (most commonly the German ones), coding the battery to the vehicle may be required. This isn't always the case if the battery is a straight swap. However, when it's an item with a higher Cranking Amps or Amp hour figure, or if you're changing from a lead acid to a calcium or AGM (Absorbent Glass Mat) battery, this changes a few of the sensors but this is mainly to tell the car what rate the alternator needs to charge at for an accurate top up. In these rare cases, you'll need a garage to use their diagnostic equipment to set the new parameters through the OBD port.



PERFORMANCE PARTS

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Words: Emma Woodcock Photography: Chris Presley

PRETTY IN PINK

Modification doesn't have to be masculine: Cara Sargent and her magenta marvel beat a different path.

Sobriety with square edges. Honda never planned for anyone to notice the Honda S-MX, a nineties people carrier that – like the Renault Kangoo or Citroen's Berlingo – is built around functionality. With wide arches, a modern Civic grille and pink paint, this example can still do that... but it's also got flair to spare. That's all thanks to its owner, Cara Sargent. Previous owner of an FN2 generation Honda Civic Type R, she managed four months out of the JDM world before she was desperate for a head-turning new project.

"The car I bought was really rough, if I'm honest," she laughs. "The exhaust was hanging off, the paint was worn but it's rare for any S-MX to come onto the market and I knew what I wanted to create." The focus here isn't on speed – the custom Top Gear Performance 2.5 inch exhaust and Japspeed manifold are for noise more than power – but Cara has taken every opportunity to do things differently. Just look at the front brakes: they use the twin-pot front calipers from a Honda Accord Type R, the first time such

components have been added to an S-MX. "The standard ones are naff and the guy who runs the S-MX forum reckoned this would work," she explains, "there were no promises but I take any chance to make it quirkier!"

Much of her efforts have been channelled into the bodywork and nowhere is that clearer than the pugnacious front grille. Sourced from an FK generation Honda Civic, it was cut to size and blended into the reconstructed bonnet by JD Autobody during a marathon workshop session that also saw the addition of 50mm wheel arch extensions. "I was looking for the Rocket Bunny effect, complete with that cut-out at the back," says Cara, "but I wanted it smoothed, so it almost looks factory." Over countless lunch breaks and cardboard mockups, she and the workshop team eventually settled on the current shape. The rare factory rear spoiler, sourced from an S-MX owning friend, adds an extra dash of style.

Even these developments look subtle next to the paintwork, a change Cara has wanted since day one.





The first time Fast Car has ever featured an S-MX? Quite possibly...



HOT RIDE



"I needed to find a factory colour for it though," she explains, "I had a similar but custom shade on parts of my previous Civic and it was a nightmare to match up..." The solution would come from Toyota and the facelifted Aygo. Called Magenta Fizz, it's available on the one-litre city car and matches Cara's needs perfectly. "As soon as I saw it in adverts, that was it. It's not Barbie pink and it's not Cadbury Purple – it's exactly in-between." Warm and full-bodied, it couples with the grille to create a contemporary look that wouldn't be out of place in Tokyo itself.

Japan Racing 16-inch alloys and a recent air ride conversion top it off. Always forging its own way, the S-MX wears a set of custom Only Charged Dubs bags at the rear. "It sits on the floor with millimetres to spare," Cara grins, before reflecting on the impact her car has on the public. "Everywhere I drive, people turn heads as if to say 'what's that?' We even got into the show and shine events at JAE and Yakushi."

Built like a box, the cabin offers ample space for expression too. Where once stood the grey plastic of factory conservatism, the S-MX now luxuriates in acres of black suede. Peppered with hexagons and piped in pink, the material has been trimmed and fitted by Cara herself. "All I'd reupholstered before was one parcelshelf and an armrest," she laughs, "and I've learnt... that you should pay someone to do it! It's hard work but seeing it all back in there changed everything. I'm still blown away to think I did it myself." A gloss black centre console, magenta air reservoir and pink interior LED lighting further tie inside to out, while the KODE three-spoke steering wheel adds scene points. It's a gift from Cara's best friend, equally car mad Lisa Richardson. "She bought it for my birthday – I couldn't ask for a better friend."

The sweat and the sticky back paid off: the finished S-MX shared centre stage at Cara and husband Brett's car-themed wedding. "That was very important

OWNER PROFILE:

Name: Cara Sargent

Dream cars? A 2JZ Mk4 Supra, an R34 Skyline GT-R or an EF Civic.

What about your old Type R? I had it for two years, loved it, and it made 230bhp



Who said modified cars aren't practical?



HONDA S-MX



“It’s not Barbie pink and it’s not Cadbury Purple – it’s exactly in-between”

HOT RIDE



for both of us,” she smiles, “we had pistons as centrepieces and a cylinder head on the head table. The colour theme was based around our cars too, with pink for mine and orange for Brett’s turbocharged Civic Type R.” The best man brought the FN2 to the nuptials; the S-MX was entrusted to maid of honour Lisa; all eyes were on the pair. Conventional car shows bubble with attention too, and all of it good. “I thought it’d be a Marmite car and it would get some hate,” Cara reflects, “but it just doesn’t. We took a risk and it paid off!” She’s tickled pink. ■



TECH SPEC: HONDA S-MX

BODY
Body repaint in Toyota Magenta Fizz, contrast areas repainted in gloss black with pink glitter fleck, JD Autobody custom front and rear wide arch conversion, JD Autobody customised bonnet with Honda Civic FK grille, Honda S-MX optional rear spoiler, Pro Dip Hydrographic and Sinister Lighting headlights with colour-adjustable halos and daytime running lights

PERFORMANCE
HKS air intake, Japspeed four-into-one exhaust manifold, Top Gear Performance custom twin-exit 2.5 inch exhaust, HKS exhaust finishers

CHASSIS
16-inch Japan Racing JR23 alloys, Honda CH1 Accord Type R twin-pot front brake calipers, PBS front brake pads, BC Racing Coilovers with Only Charged Dubs bags over coils, Air Lift Performance 3P management and cabin-mounted Air Zenith compressor

INTERIOR
Custom retrim in black suede with hexagonal stitching and pink piping, ‘track car’ style retrimmed doorcards with magenta door pulls, centre console refinished in gloss black, updated head unit, KODE three-spoke suede steering wheel, pink LED interior lighting

THANKS...
I’d like to thank Top Gear Performance in Doncaster for making me a fantastic exhaust, Pro Dip Hydrographic and Sinister Lighting for the unique headlights, Lee at Auto Matrix for his vast knowledge of the S-MX, JD Autobody for all the welding and paintwork, Only Charged Dubs for providing custom airbags, the members of my club Just Automotive Perfection (@just_automotive_perfection) for their ongoing support and encouragement, my best friend and rare fellow female car love Lisa Richardson and, most of all, my husband Brett Seargent. Without you, your support and your encouragement, my car wouldn’t be at the level it is today. Thank you for pushing me to make my ideas real



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BEFORE



AFTER

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Ultimate Stance

We hit Telford International Centre for the end of show season spectacular

2019



A while back show season was pretty much done by October, but then in 2013 along came Ultimate Stance, a multi-marque show from the crew behind the more VAG-centric Ultimate Dubs. All of a sudden show season was extended until November and there was something to look forward to at the end of the year. Yay! Luckily, a lot of it takes place indoors, so no matter the weather you're guaranteed plenty of dropped cars to dribble over in the dry. And, those with a coveted indoor space have the Saturday for a set-up day, so come Sunday morning the indoor halls (and there's a lot of them) are filled with more clean motors than you can shake a microfibre cloth at.

Also, having a set-up day means Saturday

Words & Photography **Glenn Rowswell**



OUT THERE



night is a bit of an end of season party, giving car owners an opportunity to see out the year with a cheeky pint or two (possibly more) as they look back at the past 12 months and talk winter rebuilds, new mods, and 2020 shows. Being the professionals we are, we decided to give the festivities a miss so we were fresh faced and ready for Sunday. And going by the state of what we saw stumbling into the show Sunday morning, that was probably a good thing.

As always, the standard was particularly high indoors, with an amazing array of first-class Audis on display. There were some familiar show-car favourites, plenty of previous FC feature cars, and even a few new builds for us to check out – some that we'll be featuring in the coming months.

There was also a large outside display



David Gillies' MK2 TT 2.0 TFSI ◀

We've spotted David's super-clean 8J at a few shows this year, so thought it was about time we had a closer look. Mods to the Stage 2 tuned 2.0 TFSI TT include a flawless three-stage paint job, air ride, R8 calipers with wavy discs, Porsche twin rear calipers, an R8 V10 Plus steering wheel, Vossen wheels, a Maxton front splitter and the real standout feature, that side-exit custom exhaust with diffuser delete. Nice pipework!



CHRIS SCRAGG'S C3 100 ▲

Slammed on custom Air Lift Performance suspension and sat on custom made 7x17-inch crackle black faced BBS RF split rims, Chris' 100 is one of the stars of the growing UK retro Audi scene and it's for sale! Fancy grabbing yourself a bargain or seeing more? Check out his Instagram at @fatlo_chris9n.



area, with plenty of motors that were deserving of an indoor space and a photo in these very pages. Unfortunately, though, just as we were making our way outside to start snapping the heavens opened, and as it was mid afternoon, it led to a mass exodus. So our bad, we really should have shot outside first. Luckily, we captured plenty of automobile awesomeness indoors, so we still have plenty to share with you. Enjoy and roll on show season 2020! ■



OUT THERE



PAUL SKELTON'S MK1 TT 180 QUATTRO ▲

It may be a show regular, but we never get bored of seeing Paul's immaculate 8N TT; this thing is cleaner than the day it left the showroom. Mods include Air Lift Performance 3P suspension, OZ Racing Ultraleggera wheels, a Scorpion exhaust system, a Revo remap, KSport big brakes with 356mm front and 330mm rear discs.



SAM NOBLE'S A3 8V ▲

When it came to standing out from the crowd, nothing and we mean nothing pinged out brighter in the vast halls of Telford International Centre than Sam's Java Green A3; what a colour! And there was plenty of head scratching as people did a double take at the different wheels on either side. You see Sam is a bit of a wheel whore to say the least, so why settle for one set of wheels when you can have two? Or three, or four...



Go next year:

As of yet, there's no set date for US 2020, but it's usually the first weekend of November. So keep that weekend clear and keep an eye on www.ultimate-stance.co.uk for updates.



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Uber Driver

HP Tuner's demo A45 may not be subtle, but then with 515bhp under the bonnet, it doesn't have to be...

Words **Jimbo Wallace** Photography **Chris Wallbank**



There aren't that many cars that take us by surprise these days, but the latest breed of uber hatches like the Golf R, Audi RS3 and the AMG A45 have totally transformed and redefined not only what's possible in an all-wheel drive hatchback, but also the tuning landscape that goes with them. With little more than fairly straightforward bolt-on modifications it's now possible to keep pace with - or put the frighteners up - supercars. Jumping into the HP Tuners A45 AMG for the first time is almost a little underwhelming - it's pretty dark in here with a fairly conservative smattering of carbon and some red accents all over, you could easily be in an entry level model apart from the swanky seats and 200MPH speedometer! How fast can a 2.0-litre turbocharged engine be after all? In one word - very!

Pulling away from HP Tuners HQ near Letchworth we obviously engage Sport mode immediately. The viciousness of the acceleration as the 4WD system hooks all four Nankang tyres into the tarmac is astounding, as you back off, drop a gear or even shift at high revs there are also a melodic set of pops and bangs programmed into the fuel tables as the injectors fire super-unleaded into the four cylinder turbocharged engine, generating the most wonderful noise. Generally, with somewhere in the region of 515hp at your disposal in a car that belongs to someone else it's safe to assume you take it easy. But not in this. The

way that it has been set up really inspires confidence.

It's a visceral car, this. The ride is positive and firm, yet it remains composed even when crashing across a plethora of potholes. Around town it telegraphs its potential on poor surfaces, particularly with Sport mode engaged, but as soon as speed builds, the BILSTEIN suspension loosens up slightly and starts to flow with any imperfections that the road might present. Given how accessible the performance is it's difficult to imagine much that's currently available off-the-shelf that could keep pace with this across country or along a tight, winding B-road. Seriously, even hustling something Italian and six-figured along twisty roads probably wouldn't be as much fun as piloting this weapon.

HP SAUCE

So, how did this car go from already rather rampant 360hp to a frankly borderline unnecessary 515hp and 480ft/lbs of torque? And, can the 4matic gearbox withstand the punishment that HP Tuners have added to extract the additional, impressive urge? There's no doubt that it's effortlessly, epically fast, but the really clever thing about the HP Tuner solution is that it is unlike most remap packages out there.

For starters, it's a system that you can, should you so



“Traction, traction, traction is the order of the day and even full-bore starts don't seem to upset the ESP system”



desire and feel you have the knowledge and laptop hardware, tune and develop the fuelling, ignition and boost tables yourself. Unlike traditional 'tunes' where you pay for each map and update separately, this system allows you to plug the MPVI2 interface into the OBD port, fire up your laptop and upload your individual tune using what's termed as a 'credit' by HP Tuners. Each credit costs just £50, the MPVI2 dongle will set you back £299, so if you group together with some mates to buy the dongle, you could feasibly remap your car and as many others as are listed on the HP Tuners website application list for as little as two credits each. The software required to produce the map is free from the HP Tuners website, so you can play, tweak and refine to your heart's content. This revolutionary flexibility means you can upload and play with multiple different 'files' for a fraction of the cost of other traditional remapping methods.

Of course, that could be a blessing in disguise for those less au fait with the black art of remapping, so HP Tuners will also offer pre-approved tunes from a variety of dealers. In the case of this car the tune was created by Peron Automotive, as HP Tuners are perhaps best-known as a US-based tuner, this means many of the tunes developed in Europe eventually finds their way back across the pond and vice versa. So, if you're not confident enough to create your own tuning maps, you can always buy an off-the-shelf solution from one of HP Tuners dealers. It's not just a

remapping one trick pony either, the MPVI2 will read, write and diagnostically scan a variety of OBD2 vehicles via the 15-pin port, so you'll never have to pay a garage to scan your car for fault codes ever again!

Around town it's remarkably civil, keep things below 4000rpm in comfort mode and you could feasibly be driving a factory car – along with late 30 / low 40 MPG if you really tickle it along. Let the boost build beyond 4,000 rpm mark, however and the hybrid stage 4 TTE525 turbo chimes in and the world very quickly goes backwards. It's rather deceptive, though and license-losing pace is so easy to gather, with the in-gear time for 50 -70 and TED when overtaking proving to be very impressive indeed.

It's a car that most definitely requires bags of self-restraint. The 7speed 4-matic gearbox can sometimes seem quite tardy to respond in comfort mode, but HP has also remapped the 'box mechatronics to increase shift speed when the throttle is pinned in Sport mode. Here, the shift patterns perfectly match the new potential of the motor, providing supercar-levels of acceleration and response.

GRIPPING STUFF

With a set of OZ Superleggera wheels (8.5x19in) the unsprung weight is reduced while the factory AMG brakes provide more than ample stopping power. The feel of these stoppers is wonderfully progressive as well, unlike many of





the over servoed modern middle pedals out there.

At the helm it all feels very responsive indeed, no doubt the Nankang AS-2+ 235/35x19 rubber and the revised suspension geometry help with initial bite and turn-in. Granted, the traction of the AWD system makes it a point-and-squirt kind of machine that builds speed so quickly necessitating that you're often back on the brake pedal to navigate the next bend and maintain sensible momentum. With greasy, rain-soaked roads during the mainstay of our test, the chassis was always confidence inspiring and felt an awful lot more reactive and rewarding than the slightly uninvolved factory setup. By dialling in a degree of negative camber up front initial bite and precision is increased, but to really provoke it you'd have to be travelling at warp factor 10 before things start getting out of shape. At perhaps which point you probably shouldn't be on the UK road network anyway...

Traction, traction, traction is the order of the day and even full-bore starts don't seem to upset the ESP system in the soaking wet. Once you've recalibrated your brain to accept that the full force of the turbo won't really kick in until 4k (we suspect this might be a traction-gaining tactic from the HP Tuners programmer) this little car is

unnervingly swift. Seriously, it's difficult to gauge the speed that you're carrying in a straight line, and much restraint will be necessary to keep your license clean. With just 1555kg kerb weight, this car effectively packs some 331bhp per tonne – and that's impressive, even amongst the plethora of current hairy-chested hot-hatch offerings.

Injectors and the fuel pump remain factory spec as the Mercedes system is able to deliver plenty of pressure and flow over and above factory expectations, but the HP Tuners opted for a Wagner front mount, uprated intercooler to keep the inlet temps down, as well as a revised induction kit from Forge Motorsport and a free-flowing turbo downpipe so that the pops and crackles on the overrun are possible. It sounds quite subtle at low speeds with smaller throttle inputs, but the best thing about that is that there's no drone at all at motorway speeds, augmented by subtle, yet pleasant 'whoosh-tissch' sound effects at maximum attack.



If it's not broke...

HP has remapped the 'box mecha-
tronics to increase shift speed



HOT RIDE

Lussivo are responsible
for the HP livery



TECH SPEC: MERCEDES A45 AMG

Tech spec

Engine 2.0-litre (M133) turbocharged four-cylinder; Wagner Tuning front mount intercooler, Peron Automotive ECU tune; HP Tuners MVPI2 OBD interface; Stage 4 TTE 525 hybrid turbocharger; Forge induction kit; Nortech 3.5in downpipe; AMG injectors; HP Tuners remapped gearbox mechatronics

Suspension

Bilstein B14 height adjustable coilovers; 8.5x19-inch OZ Superleggera wheels, 235/35x19 Nankang AS-2+ tyres, EBC Greenstuff brake pads; factory AMG calipers

Styling

W176 aero cannards; AMG A45 rear wing; custom HP Tuners wrap by Lussivo in the UK

All-in-all the Peron derived tune maximises the flow potential and power of the hybrid turbo while keeping the car perfectly street-able and drivable day to day. For a package similar to this one you're looking at around £6500 - £7000 all in, but half of that is accounted for by the turbo upgrade itself which remains in the factory location.

So, if you need to unleash your A45 and really fancy having a go at the binary code within the ECU yourself, HP Tuners could well hold the answer. For an even more ferociously fast version that's a little bit more engaging than Merc intended - the mods have definitely paid dividends. ■





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FAST PROJECTS



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SLIM JULES' SUZUKI ALTO **P094**

After eight months, four shows, and countless challenges, the 'Ed to 'Ed Build Off is finally over but who won...

START NEVER FINISHED

8 MAIN MODS: BC COILOVERS • NANKANG AR-1 TYRES • ROTA RB ALLOYS • TYRE STICKERS • CUSTOM FRONT ARCHES





MIDGE'S DAIHATSU SIRION **P095**

... well, don't be lazy, flick over the page and find out!

START NEVER FINISHED

MAIN MODS: BC COILOVERS • NANKANG AR-1 TYRES • ROLL CAGE • POLYCARBONATE WINDOWS • COBRA BUCKET SEAT






TOM'S 1967 VOLVO AMAZON COUPE **P096**

The Meguiar's boys are back and this time it's personal. Tom's gone proper old skool on this one...

START NEVER FINISHED

MAIN MODS: GIVE 'EM A CHANCE...





DALE'S JAGUAR S-TYPE R **P097**

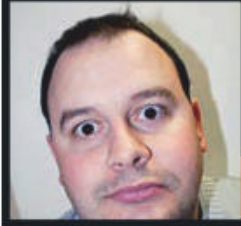
Can Dale square the series? Well, we think he's got a very good chance with his choice of project...

START NEVER FINISHED

MAIN MODS: GIVE 'EM A CHANCE...



MISSING IN ACTION




SLIM JULES' BMW E91 **MIA**

It's been another quiet month on the mods front because of the Ed to Ed Build off and erm, Christmas.

START NEVER FINISHED

8 MAIN MODS: BC COILOVERS • B3SDM 0.04 WHEELS • HYDRO-DIPPED INTERIOR • TINTS • CARBON M SPORT WHEEL







GLENDA'S AUDI RS4 **MIA**

After his recent spending spree Glenda and his RS4 are taking a well deserved break.

START NEVER FINISHED

MAIN MODS: MILLTEK EXHAUST • KW COILOVERS • KENWOOD HEADUNIT • ROTIFORMS • TOYOS






MIDGE'S AUDI TT **MIA**

Blimey, it's been so long since we've seen the TT we forgot he actually owned one. Apparently he's got a VW Beetle too?

START NEVER FINISHED

MAIN MODS: AM VIBE SUSPENSION • COBRA SEAT • FRESH • DETROIT STEEL WHEELS • ICE INSTALL





Yes! Our Midge has been on a diet. Thanks for asking

JULES' SUZUKI ALTO & MIDGE'S DAIHATSU SIRION

It's finally all over, the fat lady (or bloke) has sung! Thank god for that, but who won...?

Our very own Slim Jules in the mighty Suzuki Alto, of course! But it was a bloody close call, in fact, it was so close the boys might as well have flipped a coin to decide the winner. It's a bit of a cheek saying that Jules is a winner at all because, let's face it, there has been no winners in this build off, only losers!

But how did the final challenge all play out? Well, the boys were sent to a secret location in the Kent countryside and told to do car sumo (yes, car sumo Midge, not human sumo) until a victor was crowned.

The rules were simple: first car to be pushed out of the sumo ring by

its opponent would lose. If you're wondering how the cars coped on semi-slick tyres in a damp field, in the middle of winter, you won't be at all surprised to find out that the answer was, crap. Still, it was great fun and everyone was smiling except for the chap who owned the field. He wasn't best impressed, doh.

After 10 minutes of carnage, Jules managed to outmanoeuvre Midge while he struggled to engage reverse, then with one big blow to Midge's rear (not for the first time), it was all over.

The only thing left to do was Midge's forfeit but you can check out the video

online for that because, quite frankly, we're still feeling a tad queasy from watching the little fella throw his guts up after a mouthful of fermented soybeans! Lovely. Well, we would like to say it's been a pleasure, but it really hasn't!

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FAST PROJECTS



Nankang AR-1s definitely not
in their natural habitat



Even the sheep weren't impressed



And the winner is...



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Both the boys have committed
crimes to car culture



Moving pictures, too? It must be 2020

FAST PROJECTS



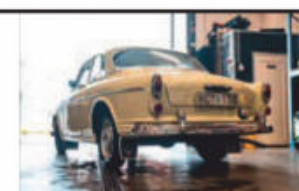
Tom V Dale 2

After last year's epic battle, the UK's most famous detailing duo are back for round two...

So last season Tom's R5 GTT build just pipped Dale's awesome W114 build. In our eyes they were both winners but this hasn't stopped Dale wanting his revenge, so they're both back with their new projects, and, of course, we're here to document the builds. Again, the deadline for the finished projects is Players Classic at Goodwood on the 20/06/2020. This might seem like an age away but when you find out what they've got planned, there's really not much time at all. Let the battle commence...



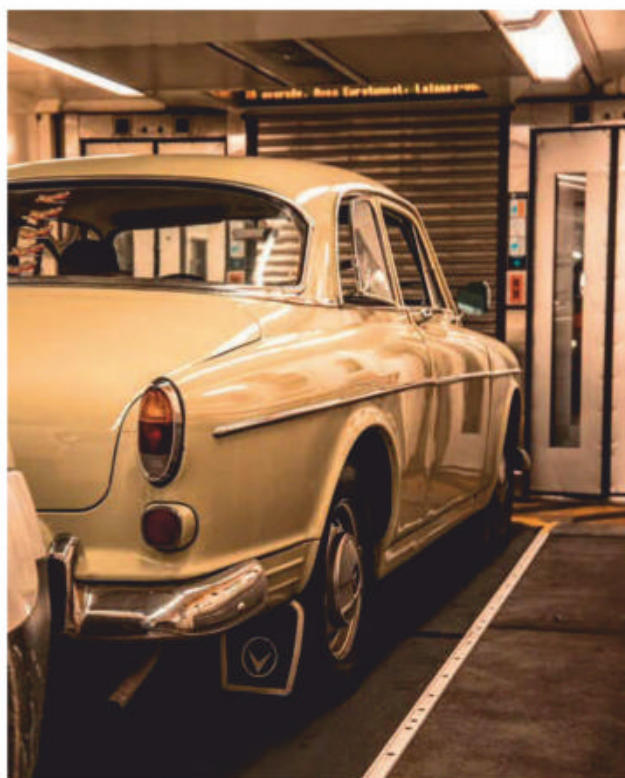
TOM'S 1967 VOLVO AMAZON COUPE



Name: Tom Clarke

Job Role: Marketer who oversees the UK marketing office, advert placement and key account marketing fulfilment.

So after building a '90s hot hatch with a modern twist last year, I decided I wanted to do a classic for 2020, and I've always had a thing for the Volvo Amazon Coupe, so that's what I bought. Of course, these cars are quite rare and decent examples in the UK aren't cheap, and not within the budgets I'm working to on this year's build. So what did I do? Well, simple really, I gave my colleagues at Meguiar's Sweden a call and got them to source one for me. I then flew out to Stockholm, picked it up and drove it 1268 miles back to the UK. What could possibly go wrong? Well, pretty much everything as it turns out; hit our YouTube



channel to watch the fun and games unravel.

Obviously we made it back in the end, and the Amazon is safely parked up outside the office, so what plans have I got for this one? Well, it certainly doesn't involve Ali G and fibreglass arches, and this time I've got a much more solid base to work from, but that doesn't mean I haven't got loads to do...



CONTACTS

www.meguiars.co.uk



Looks just like a Mark 2 Jag...
if you squint while drunk



4.2-litre V8! Yummy



DALE'S JAGUAR S-TYPE R

Name: Dale Masterman

Job Role: Full time Swirl Slayer & Events
Coordinating Marketing Executive for
Meguiar's UK.

So after last year's classic Merc build I've decided to go for something a mere three decades more modern, and a hell of a lot faster: welcome then to my 4.2-litre S-Type R Jag. It's not the most obvious choice of projects but that's half the fun. But why? I hear you cry. Well, the simple answer to that is, I've got a deep love for the Mark 2 Jaguar, but I haven't got deep enough pockets to make that dream a reality. So, with the S-Type taking inspiration and styling cues from the Mark 2, it was the next best thing, well kind of!

What are my plans for the car? Well, the



reason behind the build is the biggest clue I can give you, but put it this way, I plan to play a modern-day tribute to the iconic Mark 2 race cars of the '60s.

Where did I find this beautiful example? Well, I can tell you I didn't have to go all the way to Sweden; what a stupid idea that would be, although at least this car would make it back trouble free! Nope, I simply popped up to a dealership in Manchester, test drove three examples and picked this one. More will be revealed next month but for now I'm going to enjoy the 400bhp, 4.2-litre V8.

SEE THE VIDEOS HERE!

WWW.YOUTUBE.COM/USER/MEGUIARSUK

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This BEAMS-powered AE86 will be in the March issue of Fast Car. On sale 31/01/2020

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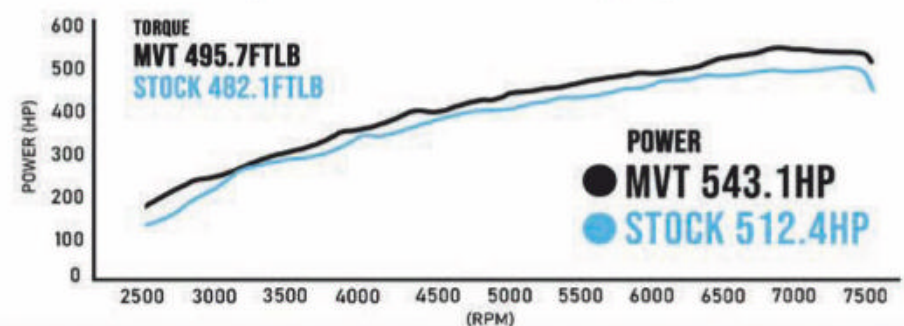
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WILDCARD



TESLA MODEL X

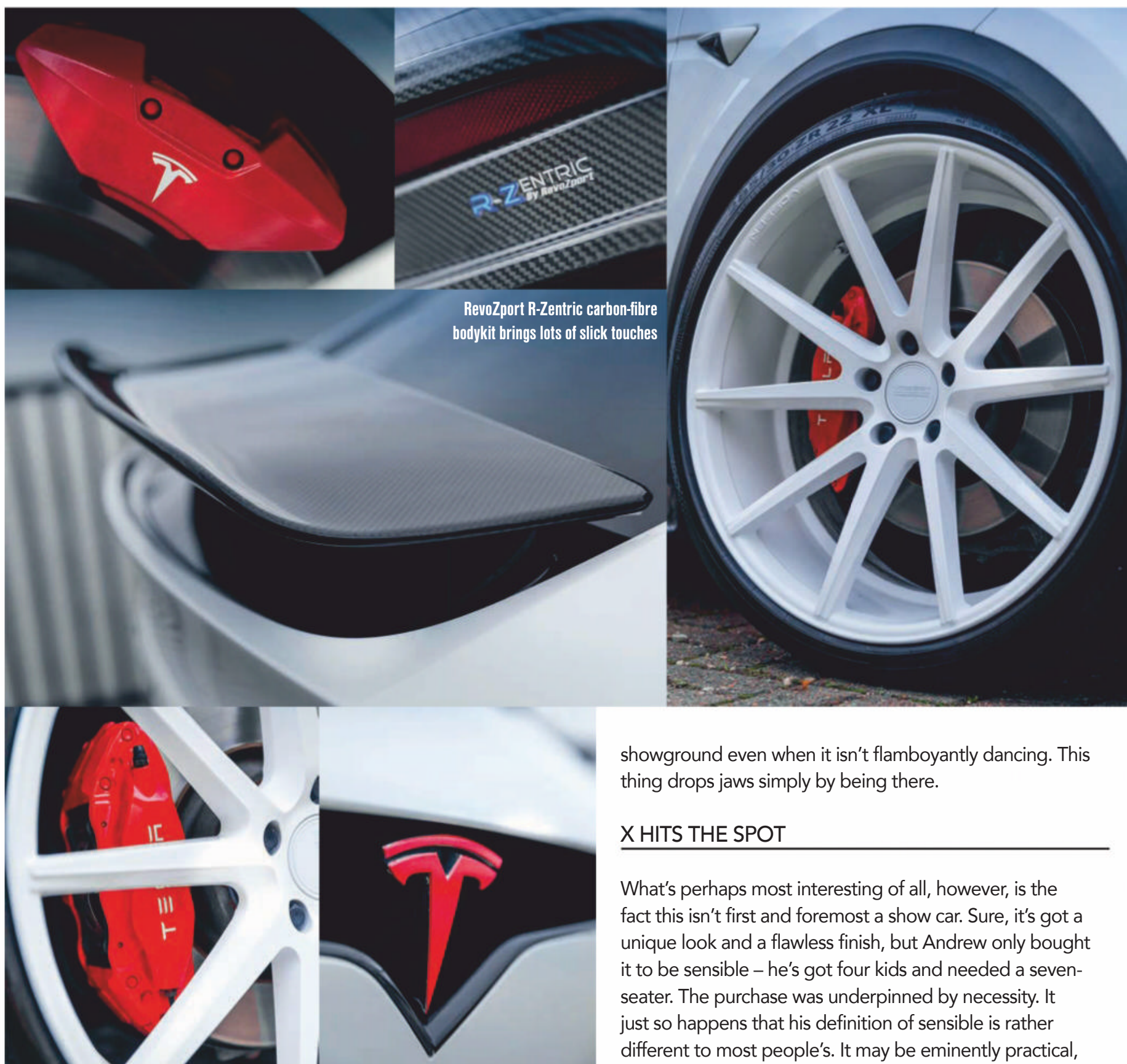
Wing Commander

To many observers, the Model X's real party piece is its peculiar falcon-wing doors. But as Andrew Dharman is keen to point out, this high-end electric SUV has many more treats to offer...

words **Daniel Bevis** photography **Daniel Pullen**



WILDCARD



RevoZport R-Zentric carbon-fibre bodykit brings lots of slick touches

"Go on mister, give us another dance..." It's a phrase

Andrew Dharman hears over and over again when he takes his Stormtrooper-chic Tesla to shows. The Model X is such an attention-seeker and when he unleashes the magic beans to make the SUV do its pre-programmed dance (in which music plays, lights flash in staccato sequences, doors open, mirrors pivot and falcon-wings flap), people just can't get enough. It's a truly, brilliantly bizarre spectacle.

Of course, any Model X can do this. But there are two key hooks here: firstly, this is a 100D, an insanely quick variant at the high end of the model range, whose lithium-ion batteries produce immediate power to enable continuum-warping acceleration. And secondly, most Model X owners don't turn them into show cars. They use them as sensible urban family runabouts or fancy airport transfers for luxury hotels. But Andrew's Tesla is cut from a different cloth, stylishly upgraded to ensure it wows on the

showground even when it isn't flamboyantly dancing. This thing drops jaws simply by being there.

X HITS THE SPOT

What's perhaps most interesting of all, however, is the fact this isn't first and foremost a show car. Sure, it's got a unique look and a flawless finish, but Andrew only bought it to be sensible – he's got four kids and needed a seven-seater. The purchase was underpinned by necessity. It just so happens that his definition of sensible is rather different to most people's. It may be eminently practical, but Andrew also likes to take the Model X on track days, it's been hammered around the Nürburgring, and it works very hard at giving him and the family a good time. So it's a show car and a family runabout, while also being a hardcore track monster. Elon Musk's interpretation of the SUV genre certainly is compelling.

Andrew's route into Tesla ownership is worthy of note as well, as it's not as if he's been a lifelong advocate of eco-motoring and hypermiling. He's a modifier at heart and his back catalogue acts as proof. "I've modded every car I've owned, and generally tend to keep them for two or three years before moving on," he explains. "I started out with a Rieger-kitted VW Polo on 16-inch rims and under-car LEDs. After that it was mostly BMWs, from a Performance BMW mini-featured 1 Series to an E91 estate that I took around the 'Ring. My usual formula is to change the suspension to coilovers, put on a custom exhaust from Style Dynamics in Hayes, and fit some new rims. My Z4 also has upgraded





The huge screen is very responsive, and the car comes with internet and Spotify included

“It’s a show car and a family runabout, while also being a hardcore track monster”

anti-roll bars and the BMW M Performance brake kit.”

A largely fossil fuel-informed set of choices then, and the decision to get a Tesla wasn’t strictly born of its zero-emissions nature. OK, that helped to appease Andrew’s wife in the purchase process. But what it fundamentally came down to was the fact he felt it was the best-handling seven-seater in its class, and came with the added bonus of supercar-rivalling performance. A no brainer, really.

“The government is supporting the transition to lower-emission vehicles,” he reasons, “plus I love the falcon-wing doors! It’s by the far the most practical car in its class from the perspective of usability and space too, and the Autopilot attracted me. I generally use the Autopilot on motorways or in traffic: the car will follow the road with the steering, and speed up or slow down when there’s traffic. It will also suggest lane changes, and if you nudge the stalk it’ll change lanes for you. It takes some getting used to, but I use it every time I drive the car.”

Andrew’s keen to champion the ingenious engineering solutions found throughout the Model X, such as the neat integrated washer jets inside the windscreen wipers, and the keyfob (which looks like a little Tesla itself) allowing you to close all of the doors at the touch of a button.

“It’s the only car I’ve had that’s improved with time,” he continues. “For example, with my last over-the-internet update, it can now use the cameras around the vehicle to act in Sentry Mode to record suspicious activity. PIN-to-drive was an option feature introduced, again via the internet, about a year ago – so you can’t move the car without the PIN. You start it by just engaging the gear ‘drive’ on the stalk and when you put your foot on the

brake, the door closes for you! The huge screen is amazing too – very responsive, and the Model X comes with its own internet and Spotify included.”

It really is like a vision of the near future and it’s true testament to the firm’s forward-thinking nature as well as their R&D that it all works so well. But naturally this isn’t just the story of a man who buys a Model X as a family wagon. With so many years of modding under his belt, the Tesla was unlikely to remain factory-stock for long.

“I was inspired by a couple of cars in the US who have the RevoZport kit, so I contacted company owner Charles Wan as there were no Teslas in the UK with the kit at the time,” says Andrew. “I didn’t quite order all the parts as I had a vision for the car and didn’t want it too extreme. When the parts I’d chosen arrived, it was all fitted by my local bodyshop who I’ve used many times before for pretty much all my cars.” The Model X came with factory air-ride (which cleverly has GPS memory, so it can raise or lower automatically when it arrives at certain locations), and Andrew’s added Evolution Airmatic lowering links which allow him to maintain full functionality of the suspension but also trick it into sitting even lower on demand. The arches are superbly filled by a set of Vossen 22-inch wheels, with a lot of thought going into the tyre choice – Continental SportContact 6 – as it was always the intention to drive the Tesla hard.

“I’ve done a couple of Euro road trips over the last two years, through Holland, Germany, Switzerland, Italy and France,” he enthuses. “It’s free to use Tesla Superchargers, and it takes 30 minutes to get around 250 miles of charge. There are many more Superchargers dotted through



Autopilot speeds up or slows down in traffic and suggests lane changes



Ultra White leather seats and a carbon fibre trim upgrade

Europe than there are in the UK, and the car tells you where the nearest ones are. My most recent road trip was with Urban Racers through Switzerland to Como, which was amazing fun; the Tesla did brilliantly well and kept up with the supercars with no problems! Plus it's such a head-turner, especially when the doors go up..."

The responses to the car at shows have been universally positive – people are gobsmacked at the drama and theatre of the spectacle. Andrew was welcomed into the carpeted VIP area at FittedUK, the indoor hangar at Players, and the VIP section at BrokeBoys. Everywhere the Model X goes, curtains part and velvet ropes are lifted. "It was also on display at TRAX, and I took it on track at Silverstone," he beams. "It handled brilliantly well, and people are always so shocked to see the performance of a seven-seater SUV. And of course the Tesla dance is a real crowd-pleaser – I had to do about 20 dances at Players 2019!"

Well, that's the price of celebrity, isn't it? This isn't just a sensible family runabout (although it very much is that too). It's arguably the coolest Tesla in the UK. And Andrew never minds raising those falcon-wings for one more dance... ■

TESLA MODEL X

TECH SPEC: TESLA MODEL X

DRIVETRAIN

100kWh lithium-ion battery; twin electric motors; AWD

CHASSIS

22in Vossen VFS1 hybrid-forged wheels; 285/30 Continental SportContact 6 tyres; Tesla factory air-ride (with GPS memory); Evolution Airmatic lowering links; OEM brake callipers painted red with Tesla decals

INTERIOR

Ultra White leather seats; Autopilot; carbon fibre trim upgrade

EXTERIOR

RevoZport R-Zentric carbon fibre body kit (front bumper add-on, sideskirts, rear diffuser, ducktail spoiler); dechrome with satin white 3M wrap; gloss black nose dechrome; partial rear debadge

THANKS

Thanks to Charles Wan at RevoZport; Vossen for their support (the car is featured on the Vossen webpage gallery and IG page); and Will and Mods at Tesla UK Owners Group who have supported and advised over the years; thanks to Elon Musk for his vision and creating a vehicle that is way better than any other in its class; and thanks to my family for putting up with me going to car shows



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Words: **Midge**

Because, without 'em, you wouldn't have anywhere to park your botty...

Nothing transforms your interior like a new set of seats. In fact, that's probably why installing new perches has been one of the more popular mods since pretty much the beginning of time. Whether it's for practicality, safety on the track or just all-round awesome looks come show time, swapping them out is something us modifiers have been doing forever, and the world over too. I mean, think about it, how many imports have you seen that come straight off the boat sporting an aftermarket bucket or different OEM recliner instead of the original driver seat? Still, what do you need to know to choose the right set for your own modified masterpiece? Well, it's not always as simple as it may appear... but rather luckily, that's where we're here to help...

DECISIONS, DECISIONS

people in the back. Beside from the looks which, let's face it, are also vitally important to most of us, all modern car seats (both OEM and aftermarket) are designed to strict specifications around 4-main criteria. The final design should:

1. Support the occupant's body under a range of driving conditions.
2. Offer protection and support in the event of an accident.
3. Allow for extended sitting without fatigue on the body's muscular system.
4. Be contour matched to the vehicle and the occupant without restricting movement.

While seats should be generally effective in all these criteria, many specialist items are designed to perform some of them better than others depending on their application. An OEM seat designed for comfort and extra long sitting periods in a motorway cruiser for example will not be as highly supportive in the corners as a custom designed race seat. You don't see a rally car fitted with a seat from road car and you don't see a CR-V fitted with a seat from a BTCC winning Honda (although, we'd certainly like to see it). The point is that, it's all down to application.

First thing's first, you have to ask yourself exactly what you need from your new seats and what you'll be doing with your car. Application is everything here so, if you're stripping your motor out and going racing what you'll be after will be entirely different than if you're building a comfortable everyday driver where you need to get



FC TECH: SEATS



OEM+ OPTIONS

For the most part here we'll be talking about specially-designed aftermarket seats, but there's always been tip top OEM+ conversions to consider too. Very often these are not only easier to fit, but plenty more comfortable too. Although, if you're looking for those elusive special edition seats, they can cost you a pretty penny along the way – even if they badly need a retrim!

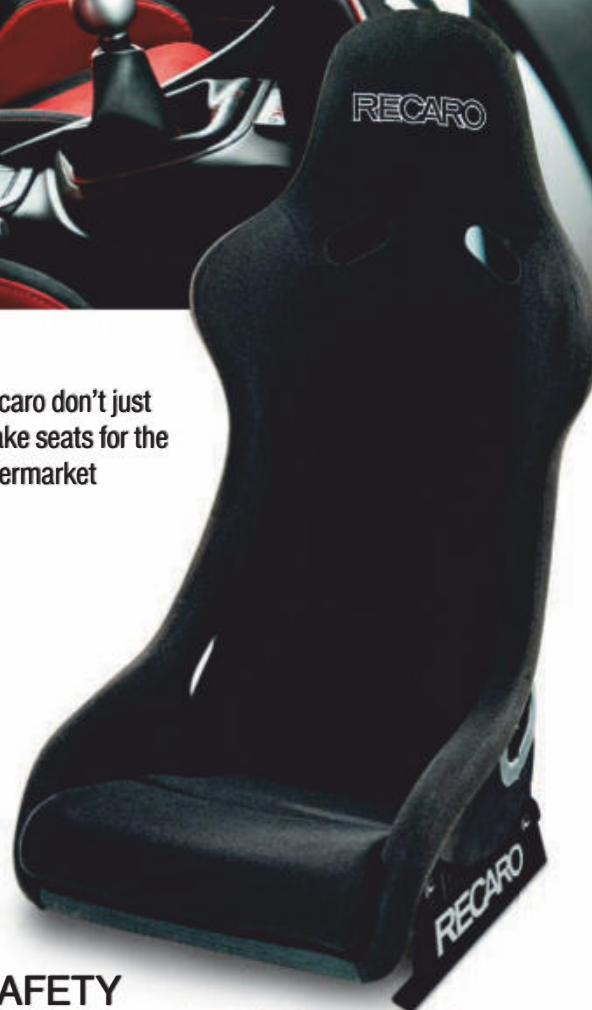
Still, the point is that most manufacturers adorn their top models with uprated 'sports' items (often from specialist seat manufactures like Cobra or Recaro). These will usually be designed to include extra support in the corners for sporty models, not to mention more desirable looks.

These always make a desirable upgrade for lower spec'd models and will usually be straightforward to fit as they'll be based on the same model floorplan.

Finally, there's the age-old OEM+ option of 'getting the 'em in no matter what'. True it will require a little fettling of the mounts or even the car floor but most things can be done nowadays. There are numerous specialist trimmers and fabricators that will be dying to help you out, at a price, naturally.



Recaro don't just make seats for the aftermarket



SAFETY

There are quite literally hundreds of aftermarket seats out there but unfortunately that includes plenty of cheaply-made knockoffs. Some of these might seem like a bargain but it's always worth remembering your seat isn't just somewhere to perch your backside, it's a piece of safety equipment. No matter what you're looking for it's important to keep safety in mind, and even more so when it comes to full-on racing seats – choosing the right one could save your life. You can't put a price on walking away from a big smash, right?

If you're looking at the second hand market you'll want to be certain about the history of the seat you choose. Just like dropping your crash helmet can render it ineffective, the same can be said if you buy a seat that's already been in an accident. For peace of mind we'd always recommend buying new, and going for the best one you can afford. As for what brand you choose, do your research. If your new seat comes from a manufacturer you've actually heard that's a mighty good start.

CONFIGURATIONS

No matter what material is used or what shape the final seat, there's basically two different types - the recliner (sometimes called a sports seat) and the fixed back racing seat (or bucket seat).



RECLINERS

In the OEM market by far the most common are recliners. It's pretty obvious why, these work well with standard seatbelts, have adjustable backs for comfort and most can be tilted forward for rear seat access in 3-door hatches. In other words - they're practical.

Aftermarket recliners have the same virtues giving versatility both for fast road cars and motors that like to hit the track once in a while. Technology from the leading manufactures is so good nowadays that some recliners are spot-on and perfectly safe for racing – those harness slots aren't always for show you know.



BUCKETS

For those in the more hardcore race world, or at least those who want to look like they are, the purposeful bucket will always be king. Initially developed for professional

motorsport use these seats are designed to offer impeccable support to drivers usually while they're being held in tight by a set of safety harnesses.

Good quality entry-level bucket seats typically start at a lower price than recliners (which is great for grass-roots and club sport cars) but there's a massive amount of technology involved in developing higher end models, and typically this will always come at a price.

That said, with regards to the use of space-age materials and clever engineering, the spec of some of these modern racing seats can be nothing short incredible, not to mention lifesaving, so for many it really is money well spent.

In a race car your seat should fit just as snugly as your helmet and that's the reason plenty of professional drivers, like the guys you see in the BTCC, will measure for their own custom seats to ensure they fit like a tailored suit. For us mere mortals though it's usually a case of squeezing into a few and finding which one is most suitable.

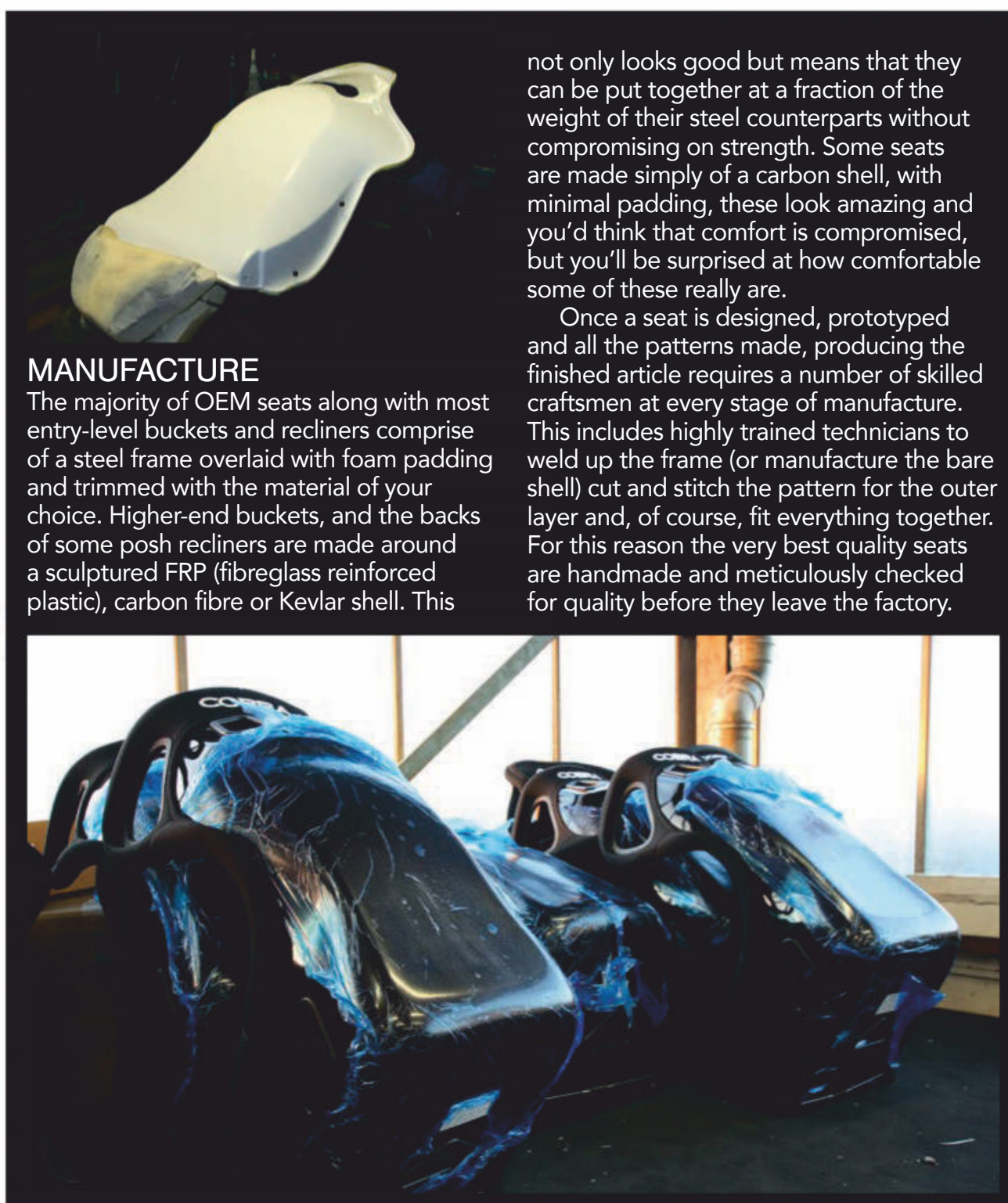


Always go for the best seat you can afford

FIA APPROVAL

If you're serious about your racing and would like to compete in the most strictly regulated events you'll need a quality bucket seat that conforms to FIA standards. In fact, from a safety point of view, it's probably best to look for FIA Approval as a matter of course.

Contra to popular belief 'FIA Approved' doesn't have to mean 'bloody expensive' - there are many entry-level seats that are built to these standards and can be had without breaking the bank.



MANUFACTURE

The majority of OEM seats along with most entry-level buckets and recliners comprise of a steel frame overlaid with foam padding and trimmed with the material of your choice. Higher-end buckets, and the backs of some posh recliners are made around a sculptured FRP (fibreglass reinforced plastic), carbon fibre or Kevlar shell. This

not only looks good but means that they can be put together at a fraction of the weight of their steel counterparts without compromising on strength. Some seats are made simply of a carbon shell, with minimal padding, these look amazing and you'd think that comfort is compromised, but you'll be surprised at how comfortable some of these really are.

Once a seat is designed, prototyped and all the patterns made, producing the finished article requires a number of skilled craftsmen at every stage of manufacture. This includes highly trained technicians to weld up the frame (or manufacture the bare shell) cut and stitch the pattern for the outer layer and, of course, fit everything together. For this reason the very best quality seats are handmade and meticulously checked for quality before they leave the factory.

HARDWARE

INSTALLATION

When it comes to fitting aftermarket seats, it's not just a case of drilling some holes in the floor, the most important thing is safety.

Both the driver and passenger seat need to be bolted to the car securely using high-tensile hardware and, if at all possible, through the standard mounting locations, simply because these are reinforced from the factory. In some cases (more often than not in a motorsport-derived vehicle) it may be necessary to use mounting locations outside the standard specifications, so reinforcement of the floor by welding in 'spreader plates' could be absolutely essential.

In the event of an accident both the mounting hardware and location are put under extreme stress so everything has to be up to the job. Cross-threaded bolts or even worse, can lead to disaster. Not only that, but come MoT time any VOSA-trained tester will quickly spot missing hardware or an insecurely mounted seat.

SUBFRAMES

So how do you get your new seat and your car married up correctly? If you want to make life easy you'll be looking for a tailored subframe. This is a rigid steel structure specific to your car model designed to bolt into the floor through the original mounting locations. If your application needs it, they'll also have a bracket for safely mounting your OEM seatbelt buckle – a crucial addition if you're not using road-legal harnesses.

Your standard seats will already have subframes built in because they're designed specifically for your car from the factory. Aftermarket manufacturers will usually keep their versions separate because they need to ensure a single seat design will fit a multitude of vehicles. Some specialist tailored subframes also incorporate a tilt mechanism allowing your seats to lean forward at the pull of a lever. These are particularly useful for fitting low-back fixed-buckets in a 2 or 3 door car where rear seat access may be a problem.

The good news is there's thousands of subframe applications available and they're designed to transform installing seats from a nightmare weekend of fabricating and welding into a half-hour DIY job.

It also makes good sense to purchase yours from the same manufacturer as your seats if possible. The dimensions of the seat-bottom mounting holes can be inconsistent between brands so sticking to the same one makes sense and should eliminate any unforeseen alignment problems.



A new set of seats can transform your interior



SLIDERS

Unless you're 'static fixing' a seat for one specific driver (something most common in race cars) most aftermarket installations will also need an added set of sliders. Like with any OEM seat these mount between the seat and subframe to allow backwards and forward adjustment. Even if you're breaking out the welder and building your own subframes, sliders are pretty much essential in a road car.



SIDE MOUNTS

Most aftermarket road seats incorporate reinforced mounting holes in the bottom which bolt directly to the subframe or slider. Others, particularly those of the racing bucket variety, have their bolt locations on the sides and will need a matching set of side mounts. Designed to allow small adjustments in the pitch angle of the seat they're most useful for getting that perfect racing seating position.

AIRBAGS

Many modern cars have airbags built into their seats and that's something to be aware of when swapping to aftermarket items. Generally speaking when these seats are disconnected from the car's wiring loom it will illuminate the airbag light on the dash the next time you turn on the ignition. In the UK at least that annoying little light is an MoT failure but that's by no means the worst of it. On most vehicles having the airbag light on disables the rest of the system meaning you have no airbags at all.

To keep the system up and running you need to fool your car into thinking it still has the airbags fitted, just like you would when fitting an aftermarket steering wheel, this can be done by installing a resistor.

There are some companies that make plug and play kits to keep everything simple but these are pretty rare and usually relatively expensive. So, for the most part, you'll need to do a bit of internet research to find out the resistance value of the seat airbag, before buying a resistor to match. Don't be fooled by what it says online either - they're typically about 70-pence a pop.

TOP CONTACTS

Cobra Seats - www.cobraseats.com

Takata - www.takataracing.com

Recaro - www.recaro.com

BRIDE - www.bride-jp.com

Buddy Club - www.buddyclubuk.com

Momo - www.momo-uk.co.uk

Corbeau - www.corbeau-seats.com

Sparco - www.sparcousa.com

Tillett - www.tillett.co.uk

Status Racing - www.statusracing.com

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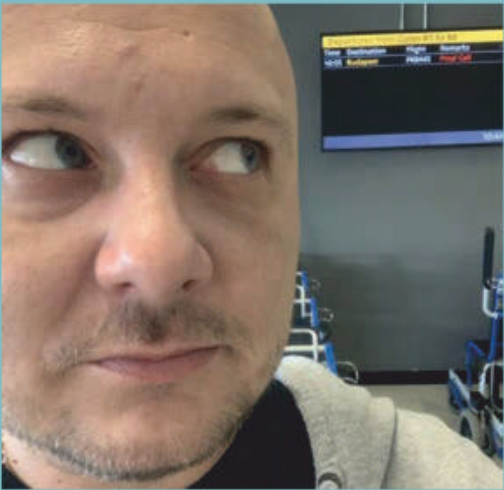
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ARSE END

Christmas Crackers:



Jules: "Midge when we said Xmas holidays, you didn't have to take that literally, you know."



Midge: "I'm having a Christmas clear-out, look what turned up today."
Jules: "What, two skips?"



Midge: "Blimey, they don't mess about at this Xmas market, I'll take two!"

As you do, there were lots of other Xmas presents knocking around...



Top Presents

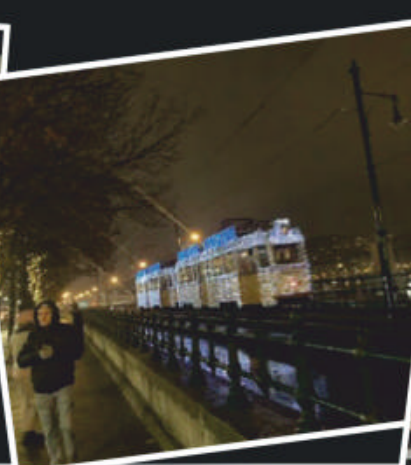
We just know you're all wondering what the top team got for Xmas, so let us enlighten you... Apart from our G buying himself an S3, as you do, the boys, rather thoughtfully, got him some extremely handy reading material. Midge bagged some tools that even he won't be able to hurt himself with (probably). Glenda, a new lamp... we think he's holding it right here. And Jules, his favourite 'experience day' – yet another speed awareness course. Third time lucky, son, eh?



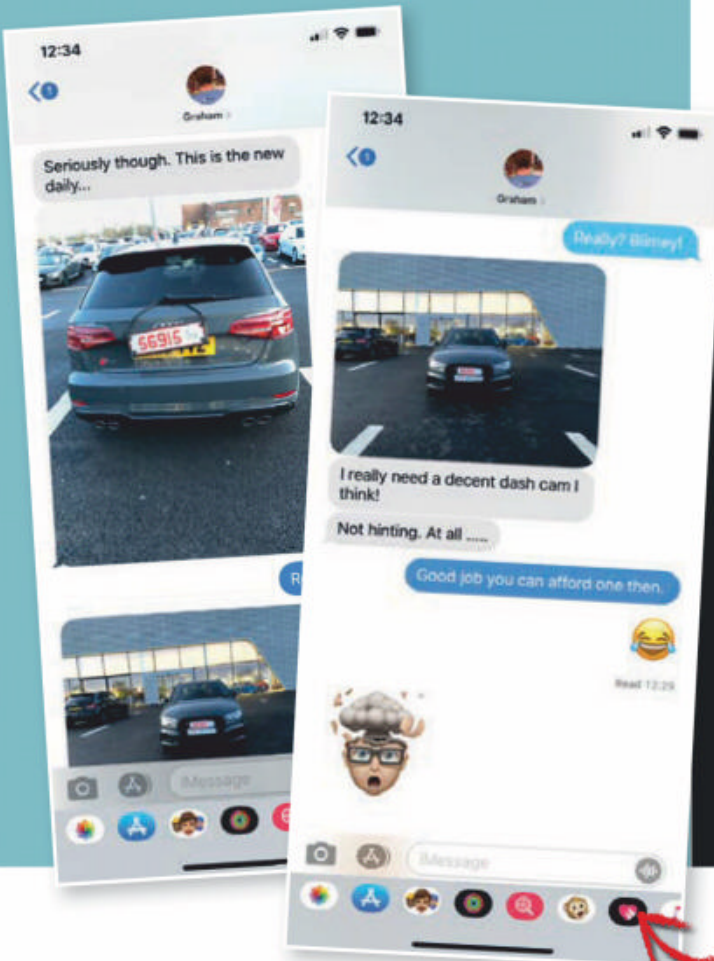
Top Decorations

As it turns out, Xmas trees appear to be just like sports cars, the bigger your tree the smaller the package you've got to pop under it. Well, we gather that's what these random horticultural offerings are all about...

THE FC PHONE GALLERY THIS CHRISTMAS IN RANDOM PICTURES



Text of the Month
No G, you're not getting a dashcam for Xmas...





Top Parties

We just don't do boring office parties here at FC, instead we all rock up at Jules' gaff and watch him break out the heavy artillery. As you can imagine, letting these buggers off about 7 inches from his back door (because it's cold outside and he couldn't be arsed to go down the end of his garden), rather upset his posh neighbours. Nearly as much as Midge parking his pickup truck on their private road, in fact. "Need your drive repaved guv'nor?" No mate, it's not that sort of housing estate!



Top Entertainment

Being children of the '80s and '90s, most of the boys like nothing better than breaking out the Xbox, PlayStation or Nintendo Wii to keep their guests entertained. That doesn't exactly happen in G's house, though. Being a child of the 1890s, his Binatone is just as old skool as you'd expect. Come to think about it, we're still pretty amazed. No, not that this actually works - more that they had electricity when G was a kid.



Top Grub

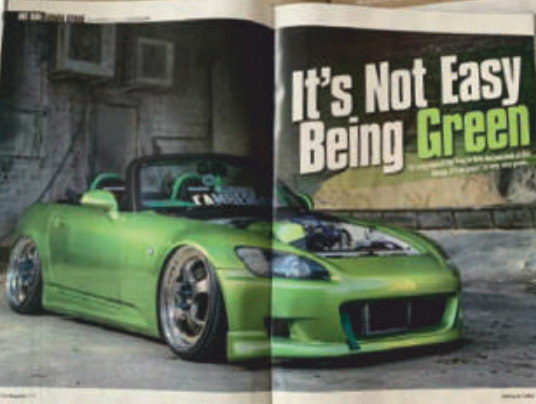
When you're a proper grown-up, Christmas is all about food and drink, that goes without saying. So, when Glenda invited Midge out for a festive dinner, not being much of a chef, he was delighted... right up until he remembered the vegan thing. Still, at least he had an equally healthy fridge to come home to.



BLAST FROM THE PAST ISSUE 390 – FEBRUARY 2018

2 years and 26 issues ago...

- We saw a world first – a Liberty Walk kitted NSX. They must be breeding; there's loads of the buggers now!
- As usual, Midge wrote a massive SEMA report, and took his time doing it. He banged on about birds, beer and big-ass trucks. Standard.
- Our mate Nino flogged his GT-R just to get his 370Z back. That's what we call dedication.
- The bods at Auto Finesse put together one of the cleanest Mk2 Golfs ever. Funny that, eh?
- Jeroen's S2K was lean, mean and so very, very green. Honda Lime Green as it happens.
- Top 10 Sleepers - still one of our favourite features ever. We haven't managed to buy them all just yet.
- The Scottish Car Show was amazing, and we got to try a deep-fried Mars Bar. At least one of them was good.
- Frederik's Scirocco was reportedly Europe's finest. And it turns out that these reports were correct.



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